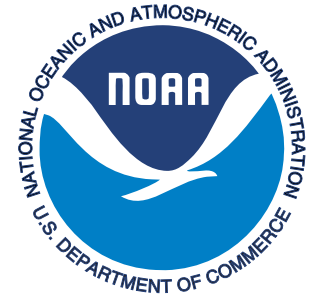


National Oceanic and Atmospheric Administration

Summary of the President's Budget

Fiscal Year 2002



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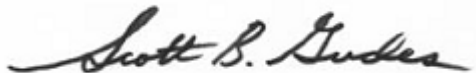
I am pleased to present the Budget Summary for the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) for Fiscal Year 2002. This Summary contains information on NOAA's programs and strategic goals for Members of Congress, Congressional staff, the media, NOAA constituents and customers, and other individuals who have an interest in our programs. It provides information on how NOAA supports and enhances the goals of the Department of Commerce and the President.

NOAA – through its seven line offices and staff offices – has established itself as one of the world's premier scientific and environmental agencies. From Boulder to Beaufort, from Kansas City to Gloucester, from Princeton to Seattle, from Honolulu to Ann Arbor, and Silver Spring to Juneau, the men and women of NOAA are providing services and addressing the critical issues that Americans face every day. We are an agency that deals with environmental change. We are experts in climate, with its cooling and warming trends. We are an agency that manages fluctuating fisheries and marine mammal populations. We observe, forecast and warn the public about the rapidly changing atmosphere and especially severe weather. We monitor currents and tides, and beach erosion. We survey the ocean bottom and provide mariners products to maintain safe navigation. We operate the Nation's most important constellation of earth observing satellites. Through our website www.noaa.gov we provide a voyage of knowledge and exploration to Americans everywhere, and especially to schools and young people across our Nation.

This FY 2002 Budget Request strongly supports NOAA's commitment to advancing our environmental assessment/prediction and natural resource stewardship missions. This budget supports our infrastructure to allow NOAA to continue its mission in future years. This budget supports our research, science and services from the local weather forecast offices around the Nation to our aircraft that fly into hurricanes and winter storms. It provides for technology infusion, critical infrastructure to reduce single points of failure, and it continues our special partnerships with universities, states, and local governments around the Nation. This budget request invests in education and human resources.

This FY 2002 budget embarks NOAA into the 21st century and our second thirty years. Under the leadership of Secretary of Commerce Donald L. Evans, we are confident that our team of meteorologists, oceanographers, marine biologists, computer scientists, climatologists and other professionals will do an even greater job of serving the American people.

We greatly appreciate the support that the Congress and our constituents have provided NOAA in the past. And, we are proud to provide the FY 2002 program for your NOAA.



Scott B. Gudes
Acting Under Secretary/Administrator
and Deputy Under Secretary

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Executive Summary

NOAA, a key component of the Department of Commerce, plays a vital role in the everyday lives of our citizens through our numerous contributions to the Nation's economic and environmental health. In a period of strongly competing Government priorities, the President's FY 2002 Budget Request for NOAA is \$3,152.3 million in total budget authority for NOAA and represents a decrease of \$60.8 million below the FY 2001 Enacted levels. Within this funding level, NOAA proposes essential realignments that allow for a total of \$270.0 million in program increases in critical areas such as infrastructure, severe weather prediction, coastal conservation, living marine resources, and climate.



Funding requested in the FY 2002 President's Budget Request will allow NOAA to ensure that our vision for environmental stewardship and assessment and prediction of the Nation's resources becomes a reality and that NOAA will continue to excel in our science and service for the American people.

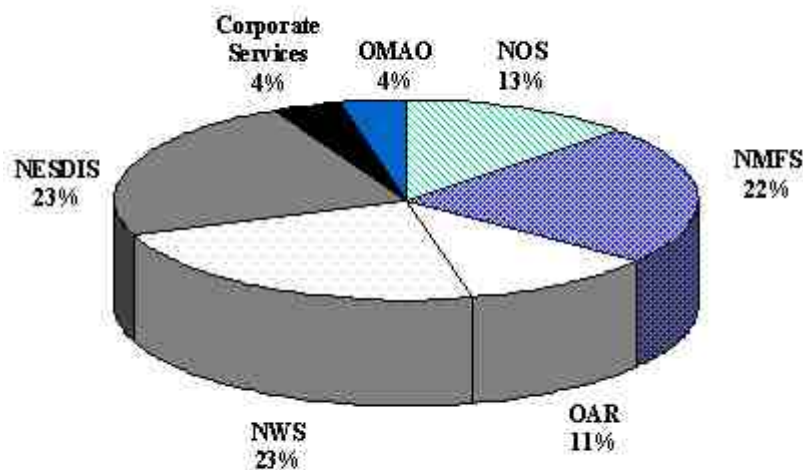
From weather forecasting to fisheries management, from safe navigation to coastal services, remote sensing to climate research and ocean exploration, NOAA is at the forefront of many of this Nation's most critical issues. NOAA's people, products and services provide vital support to the domestic security and global competitiveness of the United States, and positively impact the lives of our citizens, directly and indirectly, every single day.





NOAA's mission is to describe and predict changes in the Earth's environment and to conserve and manage the Nation's coastal and marine resources to ensure sustainable economic opportunities. NOAA implements its mission through its line and staff offices: the National Ocean Service (NOS); the National Marine Fisheries Service (NMFS); the Office of Oceanic and Atmospheric Research (OAR); the National Weather Service (NWS); the National Environmental, Satellite, Data and Information Service (NESDIS); the Office of Marine and Aviation Operations (OMAO); and Corporate Services (CS). The following chart illustrates the distribution of NOAA's Budget Request among these offices.

FY 2002 Budget Request by Line Office





Today, the Nation and the world look to NOAA to provide timely and precise weather forecasts that protect lives and property; to manage fisheries and protected species; to promote and sustain healthy coastlines; to make America more competitive through safe navigation; to examine changes in the oceans; and to inspire and create approaches that will protect and keep our precious natural resources alive for the generations to come.

NOAA conducts research to develop new technologies, improve operations, and supply the scientific basis for managing natural resources and solving environmental problems. NOAA's comprehensive system for acquiring observations – from satellites and radars to ships and submersibles – provides critical data and quality information needed for the safe conduct of daily life and the basic functioning of a modern society.



NOAA's products and services include short-term weather and space-weather forecasts, seasonal climate predictions, long-term global change prognoses, environmental technologies, nautical charts, marine fisheries statistics and regulations, assessments of environmental changes, hazardous materials response information, and stewardship of the Nation's ocean, coastal, and living marine resources.

NOAA's programs for FY 2002 support several key cross-cutting initiatives. These cross-cutting initiatives illustrate the degree to which NOAA's programs are inter-related. Each of the component programs within a cross-cutting initiative uniquely contributes to NOAA's ability to meet its mission.

The FY 2002 President's Budget Request supports the following cross-cutting initiatives, each of which is discussed in greater detail on the following pages:

- ☐ People and Infrastructure
- ☐ Maintain Satellite Continuity and Severe Weather Forecasts
- ☐ Coastal Conservation Activities
- ☐ Climate Services
- ☐ Modernization of NOAA Fisheries (NMFS)
- ☐ Modernization of the Marine Transportation System (MTS)



People and Infrastructure

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002 Total
	<u>People</u>			
NOAA/All goals	Mandatory Costs (all accounts)		\$60.0	\$60.0
	<u>Infrastructure</u>			
	<u>Systems</u>			
NMFS/BSF	NMFS Computer Hardware and Software	3.5	0.5	4.0
NWS/ASTWF	NWSTG Backup - Critical Infrastructure Protection (CIP)	0.0	7.5	7.5
NESDIS/ASTWF	Critical Single Point of Failure	0.0	0.3	0.3
NESDIS/ASTWF	Continuity of Critical Facilities - Satellite Ops. (PAC)	0.0	4.6	4.6
	Subtotal, Systems	3.5	12.9	16.4
	<u>Construction*</u>			
NMFS/BSF	Honolulu Laboratory	0.0	3.0	3.0
NWS/ASTWF	NWS Weather Forecasting Office (WFO) Construction	9.5	2.5	12.0
NOS/SHC	Coastal Services Center (CSC) Wing	0.0	1.0	1.0
	Subtotal, Construction	9.5	6.5	16.0
	<u>Operations and Maintenance</u>			
NMFS/BSF	NMFS Facilities Operations and Maintenance	4.0	0.4	4.4
NWS/ASTWF	Weather Forecasting Office (WFO) Maintenance	4.3	0.3	4.6
Facilities/All goals	NOAA Maintenance, Repairs, and Safety	1.9	1.7	3.6
NOS/SHC	Beaufort Lab Repairs	0.0	1.0	1.0
OMAO/BSF	GORDON GUNTER upgrade	0.0	1.8	1.8
OMAO/BSF	ALBATROSS IV repairs	0.0	4.0	4.0
Facilities/All goals	Boulder Facilities Operations	4.0	1.0	5.0
	Subtotal, Maintenance	14.2	10.2	24.4
	<u>Support</u>			
NWS/ASTWF	Cooperative Observers Network	0.4	1.9	2.3
OMAO/ASTWF	Aircraft Services (Flight Hours)	11.8	2.4	14.2
	Subtotal, Support	12.2	4.3	16.5
	Subtotal, Infrastructure	39.4	33.9	73.3
	TOTAL	\$39.4	\$93.9	\$133.3

* Funding is also provided for the Alaska Facilities Fisheries Center in Juneau at \$11.7 million for FY 2002.



People and Infrastructure

\$133.3 million

The People and Infrastructure cross-cutting initiative brings together the heart of what NOAA is and does. These are the underlying and interconnecting threads that hold NOAA and its programs together. Investments in NOAA's scientific and technical workforce and NOAA's facilities and equipment is essential to the agency carrying on its mission into the 21st Century. "People and Infrastructure" is about investing in the future.

PEOPLE

\$60.0 million

NOAA requests \$60.0 million in base adjustments that are critical to preserve and develop NOAA's human capital, our greatest asset. The demand for NOAA's scientific work products and services is expected to increase significantly in FY 2002 and beyond. This trend is evidenced by market responses to increasingly accurate seasonal forecasts, protection of life and safety, competing interests for marine resources and the need to protect and recover endangered species, and the application in pharmaceutical manufacturing of the earliest rewards from increased ocean exploration. Similar increases in demand for NOAA's products and services are expected from the national energy community and other potential user communities. To ensure NOAA's mission capacity is adequate to respond to these demands, NOAA must continue to invest in its people.

This investment will ensure NOAA's programs are maintained at the current services level. These are "must-pay" bills like pay raises, benefits, inflation, and rent. Failure to receive these adjustments in any given year results in program dislocations and minor cutbacks. Failure to receive these adjustments over time has a cumulative erosion effect that can be programmatically devastating. Consequently, these adjustments to NOAA's funding base are essential for NOAA to continue meeting core mission-related requirements and the expectations of the American public. Detailed information regarding ATBs is shown in Section 2: *Budget Request by Activity - Traditional Structure*.

INFRASTRUCTURE

\$73.3 million

NOAA's facilities and information technology infrastructure directly and immediately impacts the ability of NOAA's program offices to satisfy mission demands. The condition, readiness and vulnerabilities of this infrastructure have direct consequences on human welfare, economic well being, and the advancement of the state of the sciences. To ensure mission capacity, NOAA requests infrastructure funding in the following key categories: critical systems, construction, maintenance and repair, and NOAA program support.

Systems

\$16.4 million

National Marine Fisheries Service (NMFS) Computer Hardware and Software: \$4.0 million

The total request of \$4.0 million for NMFS Computer Hardware and Software represents an increase of \$0.5 million. This continued investment will be used for information technology refreshment to support the scientific and computational needs of the NMFS. Many of the observational data elements obtained from the new sensors, observers, Fisheries Research Vessels (FRVs) and survey and census data collection programs in this budget submission will rely on the NMFS Information Technology infrastructure for all or part of their life cycle. The cumulative effect of rising costs, the unmet need for adjustments to base, and expanding requirements have created an erosion of base program functionality. These funds will result in a continuous process of technology refreshment to keep pace with the increasing information flow created by the deployment of new sensors, platforms and data collection activities throughout NMFS' initiatives.

National Weather Service Telecommunications Gateway (NWSTG) Backup- Critical Infrastructure Protection: \$7.5 million

NOAA requests a total of \$7.5 million for the NWS Telecommunications Gateway (NWSTG) Backup, to provide critical infrastructure protection. This investment will enable NOAA to acquire the equipment and facility infrastructure necessary to ensure continuity of operations at the NWSTG. The NWSTG is the Nation's critical telecommunications hub for collecting, processing, and distributing weather data and information. The data processed by the NWSTG are used by hundreds of customers worldwide but the current NWSTG facility, located in NWS headquarters in Silver Spring, MD has no operational backup and is therefore a single point of failure vulnerable to natural disasters, human error, computer viruses, hacker attacks, and terrorism. This investment will mitigate these risks and will enable NOAA to comply with Presidential Directives on critical infrastructure protection and continuity of government operations.

Critical Single Point of Failure: \$0.3 million

NOAA requests a total of \$0.3 million to begin to address the critical single point of failure for NOAA's satellite products. This investment will fund a study to evaluate the backup capabilities for critical satellite products and services currently delivered from Federal Building 4 in Suitland, MD. This initiative is essential to address the potential for a catastrophic outage, which would prevent the delivery of critical satellite data and products to the NWS. In the event of such an outage, approximately 85 percent of the information used in weather forecast models would be lost, seriously limiting the ability to make accurate weather forecasts. This would be particularly dangerous if data was not available during times of severe weather events.

Continuity of Critical Facilities for Satellite Operations: \$ 4.6 million

NOAA requests a total of \$4.6 million to ensure Continuity of Critical Facilities for Satellite Operations. This investment will allow NOAA to address deficiencies and risks associated with the infrastructure of the NOAA environmental satellite command and control centers at Wallops, VA and Fairbanks, AK. This initiative forms a cohesive approach to resolving known infrastructure problems by reducing facilities' threats and risks, and completing the renovation/repair of the Satellite Operations

Control Center. These problems could jeopardize NESDIS' ability to control the Nation's environmental satellite systems and potentially lose in-orbit assets.

Construction

\$16.0 million

Honolulu Laboratory: \$3.0 million

NOAA requests a total of \$3.0 for the Honolulu laboratory. This investment will continue the replacement of the Honolulu Laboratory which consists of a main lab building and two annex building. This funding will enable the project to proceed with work needed to correct several deficiencies such as overcrowding, lack of laboratories, inadequate or nonexistent handicap access, and hazardous materials.

National Weather Service Weather Forecast Office Construction: \$12.0 million

The total request of \$12.0 million for National Weather Service (NWS) Weather Forecast Office Construction represents an increase of \$2.5 million above the FY 2001 Enacted level. This continued investment will ensure the continuation of critical facility modernization efforts in the NWS. In FY 2002, NWS plans to finalize construction of the new Weather Forecast Office in Caribou, Maine and complete the new Alaska Tsunami Warning Center in Palmer, Alaska. NWS also plans to complete modernization of the weather offices in Hilo, Hawaii and Kotzebue, Alaska.

Coastal Services Center Wing: \$1.0 million

NOAA requests a total of \$1.0 million for the Coastal Services Center Wing. This investment will allow for construction of a new wing adjacent to the main facility of the Coastal Services Center (CSC) in Charleston, SC. This small expansion will add an estimated 6,000 square feet to house office space, a storage area and a loading dock. The funding will also allow for a partial demolition of CSC's obsolete and deteriorating structures. The demolition would eradicate some, but not all, of the structures that pose threats to CSC's inhabited buildings. Additional needs for security enhancements and other expansion remain under consideration in the comprehensive facilities plan being completed in FY 2001.

Maintenance

\$24.4 million

National Marine Fisheries Service Facilities Operations and Maintenance: \$4.4 million

The total request of \$4.4 million for NMFS Facilities Operations and Maintenance represents an increase of \$0.4 million above the FY 2001 Enacted level. This continued investment will be used to cover increased operation and maintenance costs of two key NMFS facilities, the new Santa Cruz, California Laboratory, and the Kodiak, Alaska Laboratory.

Weather Forecast Office Maintenance: \$4.6 million

The total request of \$4.6 million for Weather Forecast Office (WFO) Maintenance represents an increase of \$0.3 million above the FY 2001 Enacted level. This continued investment will allow NWS to fund recurring maintenance contracts and address a backlog of over \$7.0 million in deferred maintenance

repair actions. WFOs provide forecasters with modernized facilities, supporting the advanced technology systems and the provision of weather service to the public. As the WFOs continue to age, the facilities require a significant investment in recurring and cyclic maintenance, including replacement of major facility support systems such as power backup and heating, ventilation, and air conditioning. The request will allow NWS to protect the \$250 million capital investment in modernized facilities in accordance with GSA and private industry standards.

NOAA Maintenance, Repairs and Safety: \$3.6 million

The total request of \$3.6 million for Facilities Maintenance, Repairs and Safety represents an increase of \$1.7 million above the FY 2001 Enacted level. This continued investment will allow for remediation of NOAA's deteriorating facilities. NOAA's capital assets, totaling 496 installations spread across all 50 states are valued in the hundreds of millions of dollars. The majority of these facilities are over 30 years old, and 29 percent are over 40 years in age. To date, renovations have been relatively few, and maintenance has been chronically deferred. NOAA has already identified a project backlog of over \$50 million in maintenance and repair, and this continues to grow as a comprehensive facility assessment unfolds. Major systems in many facilities are in imminent danger of failure, or are well past their useful lives. These requested funds will help address this backlog of facilities maintenance, repair and safety.

Beaufort Laboratory Repairs: \$1.0 million

NOAA requests a total of \$1.0 million for Beaufort Laboratory Repairs. This investment will allow for repairs at NOAA's Beaufort, NC Laboratory. The funds will be used to address health and safety issues, primarily the installation of a sanitary sewage connection and electrical repairs. The Beaufort Laboratory is the Nation's second oldest marine research center – a national treasure – and is collocated with the Rachel Carson National Estuarine Research Reserve.

GORDON GUNTER Upgrade: \$1.8 million

NOAA requests a total of \$1.8 million for the GORDON GUNTER. This investment will allow for the upgrade of the GORDON GUNTER to meet modern safety standards and to provide a more capable platform to support fisheries research, stock assessment and other missions such as submersible operations. The upgrade will include modifications to an engine-room bulkhead that will enable the ship to meet modern safety standards for one-compartment damage stability. This will allow a compartment to be fully flooded and the ship to remain afloat with stability. This funding also would provide positioning and instrumentation upgrades. The GORDON GUNTER, homeported in Pascagoula, MS, is a former Navy T-AGOS vessel which has been converted and currently serves in the Gulf of Mexico, the Caribbean Sea and the Southeast Atlantic Ocean.

ALBATROSS IV Repairs: \$4.0 million

NOAA requests a total of \$4.0 million for the ALBATROSS IV. This investment will allow for repairs and the extension of the ship's useful life until a new Fisheries Research Vessel (FRV) can be constructed for the Northeast Fisheries Science Center (NEFSC). In order to calibrate the new vessel with the ALBATROSS IV, the ALBATROSS IV must be upgraded and its service extended until a new vessel is completed. This calibration-overlap protects the integrity of long-term surveys.

Funding for the FAIRWEATHER is identified under the Marine Transportation System crosscut.

Boulder Facilities Operations: \$5.0 million

The total request of \$5.0 million for Boulder Facilities Operations represents an increase of \$1.0 million above the FY 2001 Enacted level. This provides funds for rent charges levied by the GSA which owns and operates the facility. This is a “must pay” bill, without which the science programs would bear the burden.

Support

\$16.5 million

Cooperative Observer Network: \$2.3 million

The total of \$2.3 million for the Cooperative Observer Network represents an increase of \$1.9 million above the FY 2001 Enacted level. This continued investment supports a nationwide network of over 11,000 volunteer operated weather observing sites used by NOAA to maintain the Nation’s climate record and to provide data to local NWS field offices. These sites are staffed by citizens dedicated to maintaining climate records and assisting the NWS. In a recent report, the National Research Council recommended that NOAA take immediate steps to sustain and modernize this critical network. NWS plans to replace 900 rain gauges and 200 temperature sensors in FY 2002. This is the first of an anticipated 3 year rescue effort which will result in the total replacement of 2700 rain gauges and 5000 temperature sensors.

Aircraft Services (Flight Hours): \$14.2 million

The total request of \$14.2 million for Aircraft Services represents an increase of \$2.4 million above the FY 2001 Enacted level. This continued investment will provide an additional 300 flight hours for data collection for a total of 1970 flight hours. Of these additional flight hours, 150 flight hours are specifically for hurricane surveillance and for severe winter storms. Another 150 flight hours will support measurements of ocean winds during high windspeed conditions, which are critical to planning for future satellite sensors. These flying hours will enable NOAA to more efficiently use its heavy aircraft and to maintain pilot proficiency during data collection under severe weather conditions.

Maintain Satellite Continuity and Severe Weather Forecasts

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002 Total
<u>Satellite and Data Services</u>				
NESDIS/ASTWF	Environmental Observing Services	\$50.7	\$14.3	\$65.0
NESDIS/ASTWF	Polar orbiting satellites (current generation)	136.7	9.6	146.3
NESDIS/ASTWF	National Polar Orbiting Environmental Satellite System (NPOESS)	73.2	83.4	156.6
NESDIS/ASTWF	Geostationary Operational Environmental Satellites (GOES)	290.2	3.1	293.3
NESDIS/ASTWF	Commercial Remote Sensing License	0.0	1.2	1.2
NESDIS/ASTWF	Data & Information Services - operational activities	24.9	6.5	31.4
	Subtotal, Satellite & Data Services	575.7	118.1	693.8
<u>Severe Weather Forecasts</u>				
OAR/ASTWF	U.S. Weather Research Program	1.5	2.2	3.7
NWS/ASTWF	Automated Surface Observing Systems (ASOS)	3.8	1.3	5.1
NWS/ASTWF	National Center for Environmental Prediction - Environmental Modeling Center (EMC) - Sustain operations	4.2	1.7	5.9
NWS/NESDIS/ ASTWF	Data Assimilation & the Joint Center for Satellite Data Assimilation	0.0	3.8	3.8
	Subtotal, Severe Weather Forecasts	9.5	9.0	18.5
TOTAL		\$585.2	\$127.1	\$712.3

* Aircraft flight hours in support of Severe Weather Forecasts are also requested and are included in the People and Infrastructure cross-cutting initiative.

Maintain Satellite Continuity and Severe Weather Forecasts

\$712.3 million

Critical to meeting our 21st Century mission is the continuity of NOAA's Satellites and Severe Weather Forecasts. In order to ensure our success, the FY 2002 President's Budget Request includes a total of \$712.3 million, of which \$127.1 million is new funding. The programs that comprise this initiative are summarized in the preceding table and the program descriptions below.

SATELLITE AND DATA SERVICES

\$693.8 million

Environmental Observing Services: \$65.0 million

The total request of \$65.0 million for Environmental Observing Services represents an increase of \$14.3 million above the FY 2001 Enacted level. This continued investment supports the operations of all of the NESDIS satellite systems, the ingesting and processing of satellite data, and the development of new product applications required for continuity of operations. NESDIS provides satellite command and control services on a 24 hours per day, 365 days per year schedule. Funding is required to keep up with increases in labor costs, software licensing, communications, and ground system maintenance.

Requirements have expanded due to greater demands on operations and control, greater amounts of data requirements for new products, requirements for more advanced software and the development of improved products, and increased demand to support users.

Polar Orbiting Satellites (current generation): \$146.3 million

The total request of \$146.3 million for Polar Orbiting Satellites represents an increase of \$9.6 million above the FY 2001 Enacted level. This continued investment will allow for the continuation of spacecraft production (NOAA K-N'). It will also allow for completion of the instruments for the European Meteorological Operational (METOP) satellites which will replace NOAA's morning polar orbiting satellite during calendar year 2005. Funding is included for upgrading and replacing aging and deteriorating ground systems to allow for continuation of operations for the Polar K-N' series through the end of its lifetime in about 2012. These ground systems are needed in order to communicate with the satellites until the last of the series is decommissioned. In addition, funds provide for replacing and upgrading the aging product generation and distribution system.

National Polar Orbiting Environmental Satellite System: \$156.6 million

The total request of \$156.6 million for the National Polar Orbiting Environmental Satellite System (NPOESS) represents an increase of \$83.4 million above the FY 2001 Enacted level. This continued investment will allow for the convergence of NOAA's Polar program, the Department of Defense's (DOD) Defense Meteorological Satellite Program and National Aeronautic and Space Agency's (NASA) research and development into a single satellite system that will save the United States Government millions of dollars over the life of the program. NPOESS is essential to meeting both NOAA's requirements in weather forecasting, oceanography, climate and search and rescue services as well as the DOD's National Security mission. NOAA has only three remaining current generation satellites on the ground to use until the first NPOESS satellite is delivered in late 2008. NPOESS needs to stay on schedule as provided for in this FY 2002 Budget Request to help ensure that polar data continuity is maintained. NPOESS satellites

are critical for weather forecasting, climate observations, U.S. military operations on a worldwide basis, and search and rescue operations.

Geostationary Operational Environmental Satellites: \$293.3 million

The total request of \$293.3 million for the Geostationary Orbiting Environmental Satellite (GOES) Program represents an increase of \$3.1 million above the FY 2001 Enacted level. This continued investment will fund the spacecrafts and launch services, including the launch vehicle and launch control personnel. Funding is necessary to maintain continuity of geostationary operations.

Commercial Remote Sensing License: \$1.2 million

NOAA requests a total of \$1.2 million for the Commercial Remote Sensing Licensing Program. This investment will ensure the timely review and processing of satellite license applications. Under the Land Remote Sensing Policy Act of 1992 (as amended in 1998), NOAA is charged with licensing and enforcing licenses of the U.S. private sector remote sensing industry. Funding will be used to establish a program to provide technical support for such reviews, support of an industry advisory mechanism, and computer infrastructure. Major monitoring and compliance activities will include review of quarterly licensee reports, on-site inspections, audits, license violation enforcement, and implementation of shutter control in national security and foreign policy crisis situations.

Data and Information Services - operational activities: \$31.4 million

The total request of \$31.4 million for Data and Information Services - operational activities represents an increase of \$6.5 million above the FY 2001 Enacted level. This continued investment is for core operational activities and will increase the Data Centers capacity to ingest, process, and archive data as well as continue the rescue of valuable environmental data. Requirements have expanded due to growing customer demands for data and products, and increased data management has become a necessity as the volume of new data continues to grow. Combined with other funding for fisheries oceanography, habitat characterization, the climate reference network, climate database modernization, and environmental data systems modernization, these funds support NESDIS' Data and Information sub-activity request.

SEVERE WEATHER FORECASTS

\$18.5 million

U.S. Weather Research Program: \$3.7 million

The total request of \$3.7 million for the U.S. Weather Research Program (USWRP) represents an increase of \$2.2 million above the FY 2001 Enacted level. This continued investment in research will improve the accuracy of hurricane landfall predictions for location, intensity, and rainfall estimates. Decreased error and uncertainty in hurricane forecasts will save lives and will help reduce the length of coastline recommended for evacuation during these powerful storms. This will allow localities to avoid millions of dollars worth of unnecessary preparations, and, at the same time, encourage those in the warned areas to have greater confidence in the accuracy of the warnings. The USWRP is a partnership between NOAA, other Federal Agencies, and universities.

Automated Surface Observing Systems: \$5.1 million

The total request of \$5.1 million for Automated Surface Observing Systems (ASOS) represents an increase of \$1.3 million above the FY 2001 Enacted level. This continued investment will complete the acquisition of 346 new ASOS dewpoint sensors. The existing dewpoint sensors fail on average every ten days and have the highest failure rate in the ASOS suite of sensors, and consequently are in need of replacement. These funds will also complete the acquisition of 346 new ASOS processor units which are needed because the current processors are over capacity. Lastly, these funds will allow NOAA to begin acquisition of the all-weather precipitation gauge necessary for climate record continuity and aviation safety. In FY 2002, NOAA will acquire 115 all-weather precipitation gauges.

National Center for Environmental Prediction - Environmental Modeling Center: \$5.9 million

The total request of \$5.9 million for the National Center for Environmental Prediction (NCEP) - Environmental Modeling Center represents an increase of \$1.7 million above the FY 2001 Enacted level. This continued investment will sustain operations at NCEP's Environmental Modeling Center (EMC). The EMC develops the computer models and other numerical forecast products which provide the basic guidance that forecasters use in making weather and climate forecasts. Today, the EMC is overly dependent on external sources of funding for its operations, degrading its ability to transfer proven weather forecasting science into NWS operations. The National Research Council in its report *From Research to Operations in Weather Satellites and Numerical Weather Prediction: Crossing the Valley of Death*, states "Almost all of the Nation's operational weather and climate guidance products come from EMC, which does not presently possess the necessary resources to transfer many of the U.S. advances in observations and modeling to operations." In FY 2002, NWS plans to provide direct base support for its suite of operational forecast models, including the aviation, regional, and global models.

Data Assimilation and the Joint Center for Satellite Data Assimilation: \$3.8 million

NOAA requests a total of \$3.8 million for Data Assimilation and the Joint Center for Satellite Data Assimilation. This request comprises \$3.0 million for data assimilation and \$0.8 million for the Joint Center for Satellite Data Assimilation. The investment for data assimilation will allow NOAA to improve data assimilation and modeling at the National Center for Environmental Prediction (NCEP). Data assimilation is the collection and processing of weather observations (satellite, aircraft, radar, data buoys, upper-air balloons) for use in operational numerical weather prediction models. These models are the foundation for all short and medium range and severe weather forecasts including aviation, marine, hurricane, rainfall, and severe weather. This critical funding request aims to improve forecasts through the use of enhanced satellite data and other data-sets in the NCEP prediction models, leveraging one of the Nation's largest capital investments in global and environmental observing systems. Investment in data assimilation ensures that the large investment in observing systems and computers has maximum benefit for the public.

In addition to data assimilation, \$0.8 million will be used to establish the Joint Center for Satellite Data Assimilation with NWS, NESDIS and NOAA Research in order to accelerate and improve the use of satellite data in forecast models. The core scientific staff and computing facilities of this "virtual" Center will consist of current NOAA resources. This request will allow for NOAA to accelerate the use of current and future satellite data in NWS weather and climate prediction operations. In addition to the NOAA contributions, NASA, with a similar level of support, will be a partner in a coordinated national effort to realize the full potential of the vast quantities of new satellite data that are becoming available. This center will make more effective use of NOAA remotely sensed data as well as integrate NASA, Department of Defense, and international satellite data into NOAA's operational models.

Coastal Conservation Activities

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002 Total
NOS/SHC	Coral Reef Institutes and Program	\$16.0	\$0.0	\$16.0
NMFS/BSF	Coral Reef Program	11.0	0.0	11.0
NESDIS/SHC	Coral Reef Monitoring	0.0	0.7	0.7
	Subtotal, Coral Reef Activities	27.0	0.7	27.7
NOS/SHC	Coastal Zone Management (CZM) Program Administration	2.8	3.6	6.4
	Transfer from CZM Fund*	3.2	(3.2)	0.0
NOS/SHC	CZM Grants	60.4	8.6	69.0
	Subtotal, CZMA	63.2	12.2	75.4
NOS/SHC	Nonpoint Pollution Implementation Grants	10.0	0.0	10.0
NOS/SHC	National Estuarine Research Reserves (NERRS) (ORF)	14.7	1.7	16.4
NOS/SHC	National Estuarine Research Reserves land acquisition and facilities (PAC)	37.9	(28.0)	9.9
	Great Bay Partnership	3.0	(3.0)	0.0
	Subtotal, National Estuarine Research Reserves	55.6	(29.3)	26.3
NOS/SHC	National Marine Sanctuaries (ORF)	32.4	3.6	36.0
NOS/SHC	National Marine Sanctuaries facilities (PAC)	3.0	13.0	16.0
	Subtotal, National Marine Sanctuaries	35.4	16.6	52.0
NOS/RPS	Marine Protected Areas	0.0	3.0	3.0
NMFS/RPS	Pacific Coastal Salmon Recovery Fund**	89.8	0.2	90.0
	TOTAL	\$281.0	\$3.4	\$284.4

* Proposed as a general offset to CZM Act activities in FY 2002.

** The FY 2002 total does not include Pacific Salmon Treaty funding of \$20 million or other NMFS salmon activities. See Section 4, *Supplemental Information* for additional details on salmon funding. Italicized numbers are non-adds.

Coastal Conservation Activities

\$284.4 million

The History

Over the past several years NOAA has proposed, through various initiatives and programs, funding to address some of the most serious challenges facing the U.S. coasts and oceans. Through those programs NOAA has made significant progress in addressing a number of critical environmental issues. The Coastal Conservation Activities Initiative will continue to build on the progress made to preserve the Nation's coasts and oceans.

NOAA's Role

In the FY 2002 President's Budget, NOAA requests \$284.4 million to continue environmental programs that are critical to ensuring the continued preservation of our Nation's coastal and ocean resources. The FY 2002 Budget Request includes resources to enhance our ability to effectively manage the National Marine Sanctuaries, enhance habitat protection through the National Estuarine Research Reserve System and strengthen and improve Marine Protected Area (MPA) programs and their conservation goals. These funds will be leveraged through improved Federal, state, local, tribal, and territorial coordination and collaboration to fill shared information, technical and operational needs. Also included are additional resources to increase Coastal Zone Management grants to states to enable coastal states to address such issues of national importance as the impact of coastal storms, declining water quality, shortage of public shoreline access, loss of wetlands, deteriorating waterfronts, and the challenge of balancing economic and environmental demands in the coastal zone. With the funds requested in FY 2002 NOAA will also continue to implement recommendations of the Coral Reef Task Force and enhance the recovery of threatened and endangered coastal salmon. The programs that comprise the Coastal Conservation Activities cross-cut are highlighted below.

Coral Reef Activities: \$27.7 million

The total request of \$27.7 million for Coral Reef Activities represents an increase of \$0.7 million above the FY 2001 Enacted level. This continued investment will allow for NOAA's support for coral reef activities across the Nation. Funding will enable NOAA to continue implementing priorities of the U.S. Coral Reef Task Force and recommendations included in the America's Ocean Future Report. Working with state, territorial, and local partners, this level of funding will support research, monitoring, and local level projects to reduce human impacts and increase sustainable use of America's valuable coral reefs.

Coastal Zone Management Program: \$75.4 million

The total request of \$75.4 million for the Coastal Zone Management (CZM) Program represents an increase of \$12.2 million above the FY 2001 Enacted level. This includes an increase of \$8.6 million for CZM grants, a technical change in the transfer from the CZM Fund, and an increase of \$0.4 million for Program Administration.

The total request of \$69.0 million for CZM Grants represents an increase of \$8.6 million over the FY 2001 Enacted level. This continued investment will allow NOAA to provide direct grants to coastal states for implementing and improving their approved coastal management programs. Currently 33 of the 35 eligible coastal states have an approved coastal management program, with approval of the 34th state program, Indiana, expected in FY 2002. Combined, these programs serve to manage and protect 99.9 percent of the Nation's shoreline to the benefit of the environment and the economy. The requested investment would provide resources for coastal states to more fully implement their coastal management plans. Specifically, NOAA provides grants to coastal states and territories to address issues of national importance such as the impact of coastal storms and flooding, declining water quality, shortage of public access to the shoreline, loss of wetlands, deteriorating waterfronts and harbors, and the challenge of balancing economic and environmental demands in increasingly competitive ports.

In order to streamline CZM administrative processes, NOAA proposes to consolidate all funding for CZM Program Administration under ORF. Doing so requires replacement of the \$3.2 million that had been transferred from the CZM Fund (a non-ORF account) in prior years. In FY 2002, the CZM Fund is proposed as a general offset to CZM Act activities.

The total request of \$6.4 million for the CZM Program Administration represents an increase of \$0.4 million above the FY 2001 Enacted level. This continued investment will support NOAA's national program administration responsibilities under the Coastal Zone Management Act (CZMA), which continues to grow. This request will assist NOAA's ability to bring together representatives from state, Federal, and tribal governments and the private sector, to address issues such as coastal hazards, habitat and polluted runoff. It will allow NOAA to address the increasing requests of the states (33 in the program, one state program in development) for support and technical assistance. This level of funding will also enable NOAA to maintain national support for the 25 National Estuarine Research Reserves.

Nonpoint Pollution Implementation Grants: \$10.0 million

NOAA requests a total of \$10.0 million for Nonpoint Pollution Implementation Grants. This investment will provide states with resources to reduce nonpoint pollution, the greatest single threat to coastal water quality. Coastal waters are increasingly impacted by polluted runoff. Symptoms include the impacts of *Pfiesteria* in coastal waters of the eastern seaboard, nutrient over-enrichment in the Gulf of Mexico, the loss of salmon fisheries in the Pacific Northwest and local closures of shellfish beds and beaches throughout the country. NOAA will provide grants to states with approved plans to address the causes of these and other symptoms of the degradation of our coastal water quality.

National Estuarine Research Reserves: \$26.3 million

The total request of \$26.3 million for the National Estuarine Research Reserves (NERRS) represents a decrease of \$29.3 million below the FY 2001 Enacted level. This funding level supports an increase in operations of \$1.7 million for a total of \$16.4 million in the Operations, Research and Facilities (ORF) Account, and a decrease in one-time construction items of \$24.5 million, for a total request of \$9.9 million in the PAC Account. With regard to the increase for NERRS operations, these funds will improve the ability of NOAA and its state partners to understand, manage, and protect these special estuarine habitats and biodiversity. The NERRS is a network of protected areas established to improve the health of the Nation's estuaries and coastal habitats through long-term research, protection, and education and to

address such issues as water quality, loss and degradation of habitat, and loss of species biodiversity. The increase will significantly enhance the monitoring and technical training programs at the 25 designated reserves, and ultimately lead to healthier estuaries, coastal water quality, and fisheries.

Of particular interest is the NERRS' System-Wide Monitoring Program (SWMP). The SWMP is a national monitoring system that will integrate water quality, and biological and land-cover change elements, making the information available to scientists and managers. The 25 existing reserves will expand their participation in SWMP by increasing spatial coverage of water quality stations, and by monitoring additional biological indicators. Reserve staff will also improve estuarine resource management by providing enhanced technical training for planners, policy-makers, and other state and local coastal decision-makers on water quality, habitat, invasive species, and sustainable ecosystem issues.

Funding of \$9.9 million for infrastructure investments in the Procurement, Acquisition, and Construction (PAC) account includes resources to complement these activities by providing resources for research, education, and visitor facilities at multiple reserve sites across the Nation. The NERR system uses a competitive priority -setting process each year to fund the best projects from the long list of eligible proposals. At some sites, land acquisition from willing sellers may be a high priority to enhance the protection of key resources. At other sites, facilities and related structures, such as interpretive centers, laboratories, boardwalks, and boat docks may be the best use of funds to enhance the outreach, education, and research programs within the NERRS.

National Marine Sanctuaries: \$52.0 million

The total request of \$52.0 million for the National Marine Sanctuaries represents an increase of \$16.6 million above the FY 2001 Enacted level. This increase of \$16.6 million is comprised of \$3.6 million for operations (for a total ORF request of \$36.0 million), and an increase of \$13.0 million for new construction (for a total PAC request of \$16.0 million). With regard to National Marine Sanctuaries operations, this continued investment will provide funding to upgrade the operating and technical capacity in the thirteen national marine sanctuaries. The results will improve protection of important sanctuary resources, including coral reefs, endangered marine mammals, sensitive habitats, and significant cultural resources. In addition to supporting the operations, this investment will provide for additional site characterization, additional enforcement capabilities, public education, and the implementation of key management changes. Changes are expected in a wide range of activities, including drafting and amending regulations, establishing new partnerships, expansion of outreach and education efforts, and additional research, monitoring and restoration.

The Congress has called for sufficient resources for operational staff, facilities and equipment, effective implementation of management plans, enforcement, and particularly for site characterization including cultural resources and inventory of existing natural resources. Elements that must be compiled for cultural and natural resource inventories include location of shipwrecks, data on marine mammals, fish, shellfish and sea birds, habitat types, and physical characteristics, such as bottom topography, water quality, and water temperature. The goal is to gather enough characterization information at each site to be able to effectively manage the resources. New funding will support these efforts and the Sustainable Seas Expeditions. This FY 2002 Budget responds to Congressional direction and the recently passed National Marine Sanctuary Amendments Act.

With regard to the increase of \$13.0 million for Marine Sanctuaries construction in the PAC Account, NOAA will continue to implement the detailed, comprehensive facilities plan developed in FY 2000 in order to respond to the growing public interest in the ocean environment and the Marine Sanctuary System. NOAA will work in partnership with other Federal agencies and private institutions such as museums, aquaria, and foundations. NOAA will establish or upgrade facilities to ensure access to sanctuary resources and allow public appreciation of the unique marine habitats in those sanctuaries. These facilities provide important outreach and education functions for these special places, since many visitors are unable to visit the actual sanctuary sites which, in several cases, are many miles offshore or require individuals to be certified scuba divers in order to view firsthand these national treasures.

Within these funds, an estimated \$6.5 million is targeted for the Dr. Nancy Foster Florida Keys Environmental Center to complete renovation and construction at this former Navy installation and properly support the multi-agency partnership and the Center's mandates to promote environmental education, protection, marine safety and rescue, and coastal stewardship. This center, which was dedicated last year, stands as a tribute to the late Dr. Nancy Foster, NOAA's Assistant Administrator for the National Ocean Service. One of the two buildings will host a state-of-the-art multi-agency (NOAA, National Park Service, Fish & Wildlife Service) visitor center. The other building will become the operations center for the Florida Keys National Marine Sanctuary and host office space; laboratory space; a diving locker; a maintenance area for mooring buoys, boats and vehicles; and dock space. The new facility will also provide consolidation of office space and boat docks that are currently scattered across multiple leased facilities in the Key West area.

Marine Protected Areas: \$3.0 million

NOAA requests a total of \$3.0 million for Marine Protected Areas. This investment will strengthen and improve agency-wide Marine Protected Area (MPA) programs and their conservation goals. This effort supports NOAA's responsibilities for fulfilling the National Marine Sanctuaries Program, National Estuarine Research Reserve Program, Coastal Zone Management Program, and coral reefs. This funding will foster collaboration with the Department of the Interior and other Federal agencies, state, local, tribal and territorial governments as well as non-governmental partners. Efforts will focus on developing a supporting framework for effective communication and collaboration among MPA programs by creating a national system of marine protected areas including NMS, NERRS, and other Federal, state, and tribal marine protected areas. These funds will also support preparation of the first comprehensive inventory and assessment of the existing system of U.S. MPAs. The NOAA MPA Program will consist of a Marine Protected Areas Center, comprised of a small core staff in Washington, DC and two regional Institutes of Excellence.

Pacific Coastal Salmon Recovery Fund: \$90.0 million

The total request of \$90.0 million for the Pacific Coastal Salmon Recovery Fund represents an increase of \$0.2 million above the FY 2001 Enacted level. This continued investment will allow the states and tribes to continue support for habitat restoration and protection, research and enhancement, monitoring and evaluation, and salmon recovery planning and implementation efforts. Funding will be used to enhance Pacific coastal salmon recovery and for the purpose of helping share the costs of state, tribal and local conservation initiatives. Programs funded within this account will assist in the conservation of Pacific salmon runs, some of which are at risk of extinction in the states of California, Oregon,

Washington, and Alaska. Funds provided to these states will have at least a 25 percent matching requirement. This request responds to current and proposed listings of coastal salmon and steelhead runs under the Endangered Species Act by forming lasting partnerships with states, local and tribal governments and the public for saving Pacific salmon and their important habitats. Other salmon increases and more detailed funding breakouts not highlighted in this cross-cutting initiative can be found in Section 4, *Supplemental Information*.

Climate Services

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002 Total
OAR/ SI/PADCC	Continuing Climate Services	\$12.2	(\$1.2)	\$11.0
OAR/SI	Regional Assessments, Education and Outreach	0.0	1.9	1.9
OAR/SI	Weather-Climate Connection	0.0	0.9	0.9
OAR/PADCC	Carbon Cycle	0.0	2.3	2.3
OAR/SI/ PADCC	Ocean System for Improved Climate Services	0.0	7.3	7.3
OAR/PADCC	Climate Change Assessments	0.0	0.7	0.7
OAR/ All goals	HPCC Program/GFDL Supercomputer	4.0	3.0	7.0
OAR/PADCC	Comprehensive Large Array data Stewardship System (CLASS)	2.0	1.6	3.6
TOTAL		\$18.2	\$16.5	\$34.7

Climate Services

\$34.7 million

The Challenge

From the storms of next week to the drought of next season to the potential human-induced climate change over the coming century, issues of climate variability and change will continue to be a major issue for the Nation. Whether responding to the ongoing drought in the Pacific Northwest and its effect on power generation and endangered salmon, or in determining how much atmospheric carbon dioxide is taken up by the North American biosphere, these questions influence users from the Western water manager to the shapers of national policy. The challenge is to extend the research successes, maintain the observational backbone, and improve the capability to provide useful information services to our customers. Improved climate predictions will enable resource managers in climate sensitive sectors such as agriculture, water management, and energy supply to alter strategies and reduce economic vulnerability. Building on the understanding of the Earth's climate system that has resulted from the Nation's strong scientific research and numerical modeling programs, this Climate Observations and Services Program will begin the transition of research data, observing systems and understanding from experiments to applications, and from basic science to practical products.

NOAA's Role

NOAA maintains a balanced program of focused research, large-scale observational programs, modeling on seasonal-centennial time scales, and data management. In addition to its responsibilities in weather prediction, NOAA has pioneered in the research and operational prediction of climate variability associated with the El Niño Southern Oscillation (ENSO). With agency and international partners, NOAA has been a leader in the assessments of climate change, stratospheric ozone depletion, and the global carbon cycle. NOAA scientists have been leaders internationally in the Intergovernmental Panel on Climate Change (IPCC). It maintains national coordination through participation in the U.S. Global Change Research Program.

The agency-wide Climate Observations and Services activity represents a partnership that allows NOAA to facilitate the transition of research observing and data systems and knowledge into operational systems and products. During recent years, there has been a growing demand from emergency managers, the private sector, the research community, decision-makers in the United States and international governmental agencies and the general public to provide timely data and information about climate variability, climate change and trends in extreme weather events. The economic and social need for continuous, reliable climate data and longer-range climate forecasts has been clearly demonstrated. NOAA's Climate Observations and Services Initiative responds to these needs. The following efforts will be supported by this initiative:

Continuing Climate Services

The total funding request for NOAA's Continuing Climate Services is \$11.0 million. These continued investments will allow NOAA to build on the climate activities started in FY 2001. These activities include:

Climate Reference Network: \$3.0 million. In order to ensure NOAA's capability to monitor very long-term changes of temperature and precipitation, a climate reference network consisting of several hundred stations must be developed by making use of the historical data from the best sites in the network of 11,000 cooperative observing sites. This climate reference network will build on data from stations identified as those with the longest environmentally stable records, most dedicated observers, and most reliable data with few interruptions.

Improving the Availability of Climate Data and Information: \$1.0 million. As the observational capabilities increase and the observing networks expand, it is essential that data management and dissemination systems are in place to make the resulting data and information widely and easily accessible to public and private sector decision makers. During recent years, NOAA has struggled to respond adequately to questions from industry, the general public, and the Government regarding potential changes in weather and climate events. NOAA is developing the required infrastructure to assemble, develop, and communicate the data, information, and knowledge about the trends, likelihoods, and future expectations of climate and weather events.

Baseline Observatories: \$2.0 million. Funding for this activity is for operations at NOAA's remote manned Global Atmospheric Baseline Observatories, measuring up to 250 different atmospheric parameters relevant to the study of climate change at: Barrow, AK; Mauna Loa, HI (since 1957); American Samoa; and the South Pole, Antarctica (also since 1957). These observations are critical to the collection and continuity of the world's longest atmospheric time series, supplying the scientific community with information on the state and recovery of the ozone layer, global carbon dioxide, and other trace gases impacting the global climate.

Ocean Observations: \$5.0 million. NOAA maintains the sustained global observing and data stewardship system necessary for climate research and forecasting as well as the long-term monitoring system necessary for climate change detection and attribution. The observation network is based on a set of "core" observations (e.g., temperature, surface wind stress, salinity, sea level, carbon dioxide), consisting of both in-situ and remotely sensed measurements, that have been identified in NOAA and other national and international reports as needed to satisfy research and operational climate requirements.

Regional Assessments, Education and Outreach: \$1.9 million

NOAA requests a total of \$1.9 million for Regional Assessments, Education and Outreach. This investment will allow for regional assessments, education and outreach related to climate variability. The impacts of climate variability from season-to-season or year-to-year manifest themselves on regional and local levels. The goal is utilization of climate variability information by regional and local managers and decision-makers to maximize economic gain and mitigate potential harmful impacts.

Weather-Climate Connection: \$0.9 million

NOAA requests a total of \$0.9 million for Weather-Climate Connection. This investment will assist in understanding predictions variability beyond the El Niño Southern Oscillation (ENSO) and predicting the weather-climate connection. As during El Niño, other sub-seasonal tropical fluctuations can also lead to shifts in the Pacific storm track, affecting the paths of storms approaching the U.S. west coast, and influencing weather across the entire country. Sub-seasonal tropical-mid-latitude interactions thereby provide a potentially important additional source of predictability beyond ENSO. NOAA will expand its diagnostic and modeling efforts to understand the relationship between sub-seasonal tropical variability and changes in the frequency, location and intensity of extreme weather events over the U.S., and document the structure of variations in tropical rainfall on weekly to monthly time-scales, as well as air-sea interactions in both tropical systems and in mid-latitude oceanic and land-falling storms.

Carbon Cycle: \$2.3 million

NOAA requests a total of \$2.3 million for the Carbon Cycle. This investment, as part of a multi-agency effort, will allow NOAA to establish a network of more densely spaced airborne and tall-tower based sampling sites over North America. The U.S. scientific community recently completed a plan for an integrated carbon cycle science program which aims to quantify, understand and project the evolution of global carbon sources and sinks in order to better predict future climate.

Ocean System for Improved Climate Services: \$7.3 million

NOAA requests a total of \$7.3 million for the Ocean System for Improved Climate Services. This investment will contribute to the global operational ocean-observing system by enhancing its present components and establishing new components. Of the \$7.3 million requested, \$3.2 million is required to support the U.S. commitment to deploy and maintain 1000 ARGO profiling floats in the proposed global array of 3,000 floats. This commitment requires a deployment of 280 ARGO floats per year. The remainder of this request, \$4.1 million, supports other observational components including Arctic Ocean fluxes, ocean reference stations, oceanic carbon, and augmentation of the volunteer observing ship (VOS) instrumentation. Finally, investments are to be made for data management and assimilation. Based on a firm scientific foundation, this ocean observing system is closely coupled with other U.S. and international observing efforts, and will greatly improve the data available for understanding climate variation.

Climate Change Assessments: \$0.7 million

NOAA requests a total of \$0.7 million for Climate Change Assessments. This investment will continue contributions to environmental assessments that have become the primary tool to deliver climate information to governments, industry, the scientific community and the general public. Over the past two years NOAA has led and contributed to Ozone assessments under the Montreal Protocol, the Intergovernmental Panel on Climate Change (IPCC), and U.S. National Assessments. This investment will support NOAA's leadership in assessing climate change and its global impact on the United States and other communities.

High Performance Computing and Communications Program/Geophysical Fluid Dynamics Laboratory: \$7.0 million

The total request of \$7.0 million (in the PAC Account) for the High Performance Computing and Communications (HPCC) Program and Geophysical Fluid Dynamics Laboratory represents an increase of \$3.0 million above the FY 2001 Enacted level. This continued investment will provide full-year support for the High performance supercomputer system at NOAA's Geophysical Fluid Dynamics Laboratory (GFDL). The system will be used full-time to attack some of the most difficult but critical obstacles to developing and testing new and more realistic models for predicting climatic variability, detecting climate change, and forecasting hurricanes. Expansion of GFDL's supercomputer is needed to answer questions regarding long-term global warming and to evaluate various scenarios reflecting different levels of anthropogenic influences on the atmosphere.

Comprehensive Large-Array data Stewardship System: \$3.6 million

The total request of \$3.6 million for the Comprehensive Large-Array data Stewardship System (CLASS) represents an increase of \$1.6 million in the Procurement, Acquisition and Construction (PAC) Account. This continued investment will afford efficient management of high volumes of data, including radar and satellite data, as well as data from radiosondes and ocean data buoys. This data is critical to the joint U.S. Global Change Research Program (USGCRP) and the scientific community. Significant increases in the volume of data require a rapid expansion in storage capacity, currently located in Asheville, NC. Similarly, telecommunications and automated access systems upgrades are needed to ensure easy and efficient access to the data.

Modernization of NOAA Fisheries

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002
<u>Science</u>				
NMFS/BSF	South Florida	\$1.3	\$0.6	\$1.9
NMFS/BSF	Expand & Improve Annual Stock Assessments	1.7	13.3	15.0
NMFS/ NESDIS/BSF	Fisheries Oceanography	0.0	2.0	2.0
NMFS/BSF	Aquaculture	0.0	1.0	1.0
NMFS/BSF	Pacific Highly Migratory Species Research	0.0	1.0	1.0
NMFS/BSF	Cooperative Research	5.5	0.5	6.0
NMFS/BSF	Fisheries Economic and Social Statistics Program	3.0	1.4	4.4
NMFS/BSF	National Fisheries Information System	0.0	8.0	8.0
NMFS/BSF	Reduce Gear Impacts on Essential Fisheries Habitat	0.0	1.0	1.0
NMFS/BSF	Fishery Observers - Improve Data Collection*	0.0	4.0	4.0
NMFS/BSF	Fisheries Habitat Restoration	8.0	2.0	10.0
NESDIS/BSF	Habitat Characterization	0.0	0.3	0.3
	Subtotal, Science	19.5	35.1	54.6
<u>Management</u>				
NMFS/BSF	Refine EFH Designations	0.0	1.5	1.5
NMFS/BSF	Northeast Fisheries Management Programs	0.0	3.5	3.5
NMFS/BSF	Regional Councils	13.1	2.5	15.6
NMFS/RPS	Sea Turtles	3.3	3.0	6.3
NMFS/RPS	Marine Mammals - Dolphins	3.5	1.0	4.5
NMFS/RPS	Atlantic Salmon Conservation	2.0	1.5	3.5
NMFS/RPS	Right Whale Activities	5.0	2.0	7.0
	Subtotal, Management	26.9	15.0	41.9
<u>Enforcement</u>				
NMFS/BSF	Enforcement and Surveillance Base	36.0	3.9	39.9
NMFS/BSF	Vessel Management Systems	1.3	6.1	7.4
	Subtotal, Enforcement	37.3	10.0	47.3
TOTAL		\$83.7	\$60.1	\$143.8

* New funding included in the FY 2001 appropriation was for specific fisheries (Atlantic and West Coast groundfish).

Modernization of NOAA Fisheries

\$143.8 million

The FY 2002 President's Budget Request for the National Marine Fisheries Service (NMFS), referred to as "NOAA Fisheries," follows Congressionally enacted levels in FY 2001 and invests in core programs needed for NOAA to meet its mission to manage fisheries, rebuild stocks, and protect endangered species such as sea turtles and whales. NOAA Fisheries modernization funds will be allocated within NMFS to ensure that existing statutory and regulatory requirements are met for fisheries and protected species management programs (including the Magnuson-Stevens Act, National Environmental Protection Act, Endangered Species Act, Marine Mammal Protection Act, and other statutory requirements). In FY 2002, there are sufficient funds for NMFS to meet its statutory and regulatory requirements.

This budget request builds upon last year's effort to begin the modernization of NOAA Fisheries. The Modernization of NOAA Fisheries Initiative encompasses a long-term commitment to improve the NMFS' structure, processes, and business approaches to meet its mission of sustaining the Nation's living marine resources and their habitat. This initiative focuses on improving NMFS' science, management, and enforcement programs and beginning to rebuild its aging infrastructure. These improvements will result in measurable progress in the biological and economic sustainability of fisheries and protected resources. In order to ensure the viability of these modernization efforts, the FY 2002 President's Budget Request includes the following program investments:

SCIENCE

\$54.6 million

South Florida: \$1.9 million

A total of \$1.9 million is requested for research and monitoring activities for the South Florida ecosystem, an increase of \$0.6 million over the FY 2001 Enacted level. As a result of the U.S. Army Corps of Engineers construction projects within the Florida Everglades, NMFS must monitor the impact of inland restoration efforts and the changing freshwater inflow on Florida Bay habitats, nutrient flow, hydrodynamics, and ultimately on measurable ecosystem productivity and health.

Expand Annual Stock Assessments: \$15.0 million

The total request of \$15.0 million for Expanding Annual Stock Assessments represents an increase of \$13.3 million above the FY 2001 Enacted level. This continued investment will provide for additional scientific survey data collection to improve NMFS' ability to make accurate, timely stock predictions. Funding at this level would add 829 chartered ship days toward the deficit of 2,564 days identified in the NMFS Stock Assessments Improvement Plan as needed for adequate stock assessment coverage. Included in this increase is \$1.0 million to enhance the assessment of marine mammal population status and trends as required by the Marine Mammal Protection Act.

Fisheries Oceanography: \$2.0 million

A total request of \$2.0 million for fisheries oceanography represents a \$2.0 million increase above the FY 2001 level. This request is comprised of two increases, \$1.5 million for NMFS and \$0.5 million for fisheries oceanography within the National Environmental Satellite, Data and Information Service

(NESDIS). The \$1.5 million increase will enable NMFS to assess how long-term environmental factors affect fish stocks. By better identifying the potential environmental causes of fish population fluctuations, NMFS will be able to improve its stock predictions and resultant management actions. The \$0.5 million increase will enable NESDIS to explore using Synthetic Aperture Radar technology and data in fishery resources monitoring. This investment would build on applications demonstrated in October 1999 using RADARSAT-1 imagery in Alaska, and would result in radar data and products useful in fisheries enforcement, NMFS laboratories and for other agencies such as the Coast Guard.

Aquaculture: \$1.0 million

NOAA requests a total of \$1.0 million to promote environmentally sound marine aquaculture.

NOAA will improve the aquaculture regulatory framework by developing and implementing of a code of conduct for responsible aquaculture. NOAA will also address the important environmental aspects of aquaculture in the non-indigenous species area, especially for shrimp viruses.

Pacific Highly Migratory Species Research: \$1.0 million

NOAA requests a total of \$1.0 million for Pacific highly migratory species research. This request would fund growing and critical research needs as a new Fishery Management Plan for these species is implemented. Activities include: conducting stock assessments and biological studies for four major tuna species and three species of sharks, conducting research to evaluate the extent of bycatch and effectiveness of mitigation measures in purse seine fishing using fish aggregating devices, and developing and implementing assessment methodologies tailored for highly migratory species.

Cooperative Research: \$6.0 million

A total request of \$6.0 million for Cooperative Research represents an increase of \$0.5 million over the FY 2001 Enacted level. This request will expand cooperative research activities in the Southeast and will involve fishermen in designing and conducting research programs, utilizing their expertise and insights in resource survey design and interpretation. By working together to design and implement data collection programs, these partnerships between NMFS and the industry significantly strengthen fisheries research. This Southeast cooperative research effort compliments similar efforts, including Northeast Cooperative Research funded at \$5.0 million, cooperative research coordinated by the Northeast Consortium funded at \$5.0 million and, and National Cooperative Research efforts, funded at \$3.0 million.

Fisheries Economic and Social Statistics Program: \$4.4 million

A total request of \$4.4 million for expanding economic and statistics research represents a \$1.4 million increase over the FY 2001 level. This request is needed to conduct economic and social assessments of management alternatives by improving NMFS' economic and social science staff capability, and initiation of data and applied research programs. This funding will enable NMFS to better evaluate and predict the economic and community impacts of potential management actions, and satisfy statutory, regulatory and Executive Order requirements for assessing the benefits and costs of fisheries management and protected species management actions

Fisheries Information System: \$8.0 million

NOAA requests a total of \$8.0 million for the National Fisheries Information System. This investment will begin the implementation of a National Fisheries Information System to improve the quality, timeliness, coverage and access to data collected by state and Federal entities for use in the science and management of fisheries. This system will be developed in cooperation with the fishing industry, states, interstate fisheries commissions, and other stakeholders as outlined under section 401 of the Magnuson-Stevens Act. The funding provided to the Atlantic States Marine Fisheries Commission for regional implementation activities in FY 2001 is included in addition to this funding. The proposed system would improve the accuracy and effectiveness of existing data collection programs by establishing common data collection, information technology, and quality standards for regional programs, and integrating the results into unified Web-enabled information system. The proposal will also fill critical information gaps through initiation of new data collection programs that will subsequently improve living marine resource policy decisions by reducing data uncertainties.

Reduce Gear Impacts on Essential Fisheries Habitat: \$1.0 million

NOAA requests a total of \$1.0 million to reduce fishery impacts on essential fish habitat. This request funds research that will focus on the effects of specific fishing activities on essential fish habitat, comparing those impacts with other sources of habitat degradation, monitoring habitat recovery in areas where fishing has been curtailed, and developing management strategies to ensure sustainable harvesting practices.

Fishery Observers - Improve Data Collection: \$4.0 million

NOAA requests \$4.0 million for additional Fishery Observers - Improving Data Collection. This investment will provide for increased observer coverage to minimum levels around the country as required by regulation or to optimal levels as recommended by fisheries scientists for statistical validity, and initiates coverage in fisheries that were previously not observed. Observers are increasingly essential to managing fisheries and marine mammal stocks. To improve the quality of data collected by observers and to provide a more sound base for fishery management decisions, the plan includes resources to provide better coordination and consistency of NMFS observer program policies and procedures. It also provides for the development of technological enhancements to make the future observer program less costly and more efficient.

Fisheries Habitat Restoration: \$10.0 million

A total request of \$10.0 million for Fisheries Habitat Restoration represents an increase of \$2.0 million over the FY 2001 level. These funds will expand NMFS involvement in community-based restoration projects. This highly successful national effort encourages partnerships with groups outside NOAA and has regularly leveraged appropriated funds by factors of five to six, and by as much as ten to one. Presently, NOAA receives many more high-quality habitat restoration proposals than it has funds to support. The requested funds would enhance national restoration efforts to meet this enthusiastic demand.

Habitat Characterization: \$0.3 million

NOAA requests a total of \$0.3 million for Habitat Characterization. This investment will allow NESDIS to develop the ability to map fishery habitat distributions in space and time, and to answer important questions with such maps. A computer mapping capability will be created that will allow spatial/statistical delineations (stratification) of the landscape. Such maps can represent inferred ecosystem “potentials” that are critical in monitoring, assessment, and management. The system will allow rapid iteration of the mapping process, thus affording opportunities to test, modify, and document model criteria, statistical mapping technique, and data selection. In this manner, habitat maps can be adaptively maintained.

MANAGEMENT**\$41.9 million****Refine Essential Fisheries Habitat Designations: \$1.5 million**

NOAA requests a total of \$1.5 million to refine essential fish habitat designations. This request funds programs to collect critical scientific data needed to identify essential fish habitat more precisely for managed species, enhancing the effectiveness of fishery management actions, and filling data gaps that can result in litigation.

Northeast Fisheries Management Programs: \$3.5 million

NOAA requests a total of \$3.5 million for the Northeast Fisheries Management program. This investment will enable NMFS to continue rebuilding overfished and overcapitalized Northeast fisheries including groundfish and scallops by reducing the amount of fish takes by fishermen, thus giving the fish stocks time to recover. Funding will also be used, in part, to implement new and innovative cooperative research efforts in the Region.

Regional Councils: \$15.6 million

The total request of \$15.6 million for Regional Councils represents an increase of \$2.5 million above the FY 2001 Enacted level. This continued investment will support all eight Regional Councils’ increased workload from new programs and regulations as a result of implementing the Sustainable Fisheries Act amendments to the Magnuson-Stevens Act. The Regional Councils are integral partners with NOAA in the management of the Nation’s fisheries. NOAA is the Regional Fisheries Councils’ only source of funding to carry out their mission.

Sea Turtles: \$6.3 million

The total request of \$6.3 million for marine sea turtle activities represents an increase of \$3.0 million over the FY 2001 Enacted level. This investment will allow NOAA to recover Atlantic and Pacific marine sea turtle stocks threatened by domestic and international fisheries interactions as well as inadequate conservation of marine turtles on nesting beaches.



Marine Mammals - Dolphins: \$4.5 million

The total request of \$4.5 million for dolphin conservation and recovery represents an increase of \$1.0 million over the FY 2001 Enacted level. This investment will allow NOAA to expand current activities in dolphin stock identification and assessment, to reduce mortality incidental to commercial fishing activities, and to initiate efforts to use bottlenose dolphins as an indicator of the health of the ecosystems they occupy.

Atlantic Salmon: \$3.5 million

The total request of \$3.5 million for Atlantic salmon represents an increase of \$1.5 million over the FY 2001 Enacted level. This investment will allow NOAA to conserve and restore healthy populations of Atlantic salmon in the Gulf of Maine Distinct Population Segment (DPS) and their habitats. NOAA will use this investment to expand the monitoring of Atlantic salmon population dynamics, expand habitat assessment and conservation, enhance scientific knowledge related to human resource usage and development activities that are affecting species survival, and strengthen evaluations to minimize risk through coordinated planning, innovative partnering, and on-site involvement in restoration, conservation, and protection activities.

Right Whales: \$7.0 million

The total request of \$7.0 million for Northern Right Whales represents an increase of \$2.0 million over the FY 2001 Enacted level. This investment will allow NOAA to expand current Northern Right Whale population and health assessments and recovery efforts in the North Atlantic and in the North Pacific.

ENFORCEMENT**\$47.3 million****Enforcement Activities: \$47.3 million**

The total request of \$47.3 million for Enforcement Activities represents an increase of \$10.0 million above the FY 2001 Enacted level. This continued investment will allow NOAA to modernize its fisheries and protected species enforcement programs. Improved enforcement is essential to ensuring that fisheries regulations are effective and yield conservation benefits for the industry and the public. Of the total funding amount, \$7.4 million (of which \$6.1 million is new funding) is included for additional support, continued modernization and expansion of the vessel management system (VMS) program. The VMS national program is capable of accommodating nearly 10,000 vessels throughout a number of different fisheries. The request also includes \$39.9 million (of which \$3.9 million is new funding) to expand and modernize base enforcement programs. These programs include Alaska and west coast groundfish enforcement, protected species enforcement, state and local partnerships, specialized Magnuson-Stevens Act investigatory functions, community oriented policing and problem-solving, and swordfish/Patagonian toothfish import investigations.

Modernization of the Marine Transportation System (MTS)

Line Office/ Strategic Plan	Item	FY 2001 Enacted	Increase/ Decrease	FY 2002 Total
NOS/PSN	Electronic Navigational Charts*	0.0	3.6	3.6
NOS/PSN	Shoreline Mapping*	0.0	1.0	1.0
NOS/PSN	National Spatial Reference System*	0.0	0.5	0.5
NOS/PSN	Implement Forecast Models	0.0	0.5	0.5
NOS/SHC/PSN	Coastal Storms	0.0	3.0	3.0
NOS/PSN	Spill Response and Habitat Restoration*	0.0	2.0	2.0
OMAO/PSN	FAIRWEATHER - Repair and Activation	6.8	2.7	9.5
TOTAL		\$6.8	\$13.3	\$20.1

* These programs are ongoing activities for which funding was tracked at the Subactivity rather than the programmatic level, but which support the coordinated MTS initiative. Shoreline mapping, now rolled into mapping and charting base activities, received \$1.5 million in FY 2001 Enacted funding.

Modernization of the Marine Transportation System (MTS) \$20.1 million

The Challenge

Since our Nation's founding, maritime trade has been vital to economic prosperity. NOAA's lineage dates back to 1807 when President Thomas Jefferson called for charting the coasts and harbors. Today, more than 95 percent of U.S. foreign trade moves by sea. In 1998, about 2.4 billion tons of cargo moved on our waterways and through our ports. U.S./foreign waterborne commerce grew about 23 percent from 1993 to 1997 – about 4.6 percent per year. Trade is projected to at least double by 2020. Vessels have also grown dramatically; over the last 50 years, the length, width, and draft of commercial vessels has doubled, pushing the limits of many ports and posing significant safety concerns. Ensuring safe and efficient port operations is vital to maintaining the competitiveness of the U.S. port industry and exports. Growth in ferry, cruise line, and recreational boating is contributing to increased congestion on our waterways. Nearly half of all goods in marine commerce are petroleum products or other hazardous materials. One key to reducing risk is to invest in the national information infrastructure that supports the safe and efficient movement of goods and people.

In 1998, Congress directed Federal agencies to produce an assessment of the U.S. Marine Transportation System (MTS) and a plan for modernizing government navigation services. This FY 2002 request is NOAA's effort to direct a set of targeted investments to expand and capitalize on its existing programs in Mapping and Charting, Survey Backlog, Geodesy, Tide and Current Data, Response and Restoration, and Fleet Replacement to further the goals of this ongoing effort. This is a first step toward developing a 21st century transportation system that can address the major issues faced by the country in maritime safety, security, infrastructure, the environment, and competitiveness.

NOAA's Role

NOAA maintains the Nation's suite of nautical charts, the coastal water level observations system, and the geodetic positioning reference system needed to ensure safe navigation. NOAA also maintains the scientific expertise to respond to hazardous releases when they occur. NOAA charts are developed from NOAA's hydrographic and shoreline surveys, tide and current measurements, and national geodetic/geographic positioning data, as well as information from other sources. Demonstration projects have shown that these programs can provide the accurate data necessary for determining precise under-keel and overhead/bridge clearances and support near zero visibility docking, allowing commercial vessels to more safely navigate and efficiently load and move cargo in and out of depth-limited harbors. NOAA's integrated suite of surveying, charting, water level, and positioning services is capable of increasing the efficient movement of goods while significantly reducing the risk of marine accidents and resulting environmental damage. When accidents do occur, NOAA can provide the necessary support to ensure a scientifically-based response and restoration of damaged coastal resources. Economic benefits include reducing vessel fuel consumption and port pollution, supporting just-in-time delivery of goods, enhancing the competitiveness of U.S. exports, and restoration of important coastal resources that support tourism, fishing, and other ocean- and coastal-dependent industries. Specific program increases are described in detail below.

Electronic Navigational Charts: \$3.6 million

NOAA requests an increase of \$3.6 million for Electronic Navigational Charts (ENCs). This continued investment will allow for the ongoing production and maintenance of ENCs and the ability to enhance and expand the full suite of ENCs to a total of 200 from the 70 in existence at the end of FY 2000. ENCs provide a more complete picture of coastal waterways.

Shoreline Mapping: \$1.0 million

NOAA requests an increase of \$1.0 million for Shoreline Mapping. This investment will allow for a more accurate national shoreline. An increased emphasis on shoreline mapping is required to keep pace with the growing stress on our Nation's marine transportation system and to assist states and coastal managers.

National Spatial Reference System: \$0.5 million

NOAA requests an increase of \$0.5 million for the National Spatial Reference System (NSRS). This investment will increase the Nation's access to the Continuously Operating Reference Stations (CORS), a set of Global Positioning System (GPS) stations, and the mainstay of the NSRS. This investment will expand the number of National CORS, expand the Federal Base and Cooperative Base

Network stations connected to the national standard for vertical heights, which are used for all applications that require surveying. These activities will provide better access to accurate and consistent height data for a wide-range of economic pursuits.

Implement Forecast Models: \$0.5 million

NOAA requests a total of \$0.5 million to Implement Forecast Models. This investment will enhance tides and tidal current services to the user by obtaining new current meter measurements at locations critical to the navigation community and by accelerating the development of nowcast/forecast products for users of oceanographic data.

Coastal Storms: \$3.0 million

NOAA requests a total of \$3.0 million for Coastal Storms. This investment will build upon existing NOAA environmental monitoring and data management capabilities and will enhance our efforts to provide Marine Transportation System users, as well as coastal resource managers, with the data and tools needed to safely maximize commercial shipping, mitigate hazards, and sustain the environmental health of coastal communities and resources when disasters strike. Initial efforts will focus on a pilot project in Florida and include updating shallow water bathymetry, adding sensors to National Water Level Observation Network stations, and developing a hydrodynamic model for improved forecasting applications.

Spill Response and Habitat Restoration: \$2.0 million

NOAA requests an increase of \$2.0 million for Spill Response and Habitat Restoration. This investment will develop and distribute tools and guidance to assist decision makers when releases of contaminants occur within the Marine Transportation System and other coastal environments. These funds will enable NOAA to more accurately evaluate the effectiveness of spill response measures, leading to improved response techniques as well as better methods of restoring injured resources.

FAIRWEATHER Repair and Activation: \$9.5 million

The total request of \$9.5 million for the FAIRWEATHER repair and activation represents an increase of \$2.7 million above the FY 2001 Enacted level. This continued investment will complete the refurbishment and reactivation of the FAIRWEATHER and help reduce the survey backlog, a high marine transportation priority. This project was directed by Congress in 2001 and makes efficient use of this vessel which has been located at NOAA's Pacific Marine Center. With its home port in Alaska, the FAIRWEATHER will provide a platform that will help reduce the critical hydrographic survey backlog.

Other Key NOAA Programs

Ocean Exploration: \$14.0 million

The total request of \$14.0 million for Ocean Exploration represents an increase of \$10.0 million above the FY 2001 Enacted level. This continued investment will help re-establish NOAA's leadership in this major initiative of ocean exploration and research. Despite covering 70 percent of Earth's surface, the oceans remain largely unexplored and unknown. Not surprisingly, most of the oceans' resources remain untapped. Our best scientists believe that fewer than 25 percent of the species that live in the oceans have ever been identified. Even within America's own Exclusive Economic Zone (EEZ), less than five percent of the ocean floor has been mapped in high resolution. In fact, prior to FY 2001, the United States did not even have a concentrated program of ocean exploration. As a result, NOAA has pursued a course of ocean resource management without adequate decision-making data and information being available to policy makers, regulators, and commercial users of the ocean's resources.



However, today we live in an age of technological innovation. There are many opportunities that simply were not available in earlier decades. We now can completely rethink how we might conduct exploration in Earth's oceans. Developments in sensors, telemetry, power sources, microcomputers, and materials science have greatly improved our ability to go into and study the undersea frontier.

The benefits of such a program of exploration are potentially enormous. For example, gas hydrates comprise more than 50 percent of all of our planet's carbon – and potentially hold more than 1 000 times the fuel in all other estimated reserves combined! In addition, there are certain to be other benefits which currently are beyond our ability even to conceive. With 95 percent of the underwater world still unknown and unseen, what remains to be explored may hold clues to the origins of life on earth, cures for human diseases, answers to how to achieve sustainable use of our oceans, links to our maritime history, and information to protect the endangered species of the sea.



We are stewards of our oceans' resources. Yet, we cannot effectively manage what we do not know. We need to explore the oceans in the same way that the U.S. has successfully explored space. We need to determine what our marine resources are, their relative abundance, and the rates at which they can be used and replenished. Accurate knowledge of the oceans is essential for environmental, economic, and national security.

The FY 2002 budget increase will enable NOAA to fund six major and several minor interdisciplinary voyages of discovery that will map the physical, geological, biological, chemical, and archaeological aspects of parts of the U.S. EEZ. NOAA will conduct missions of exploration in the Gulf of Mexico, South Atlantic Bight, Northwest Hawaiian Islands, Northeast Pacific, California, and the Gulf of Alaska. Education and outreach is a major component of NOAA's Ocean Exploration Initiative. NOAA will carry-out this program relying on partnerships with universities, the private sector, and other agencies. NOAA's Ocean Exploration Initiative will help us to fulfill our national strategic goals to Sustain Healthy Coasts, Recover Protected Species, and Build Sustainable Fisheries.

Marine Environmental Research: \$11.6 million

The total request of \$11.6 million for Marine Environmental Research represents an increase of \$1.8 million above the FY 2001 Enacted level. This continued investment will support ongoing operations at OAR's Atlantic Oceanographic Meteorological Laboratory (AOML) and the Pacific Marine Environmental Laboratory (PMEL). The restored funds will enable AOML's Remote Sensing Division to



reactivate its field measurements that provide data critically needed for major community health-related decisions in contaminant-release emergencies in Florida and elsewhere. Coral reef monitoring activities are also supported. These funds will also enable PMEL's Fisheries Oceanography program to reverse its 20% reduction in ocean measurements planned for the Gulf of Alaska and the Bering Sea. These funds are important to the study of the potential influences of climate changes on recent shifts in the species composition of these ecosystems including declines in salmon and steller sea lion populations.

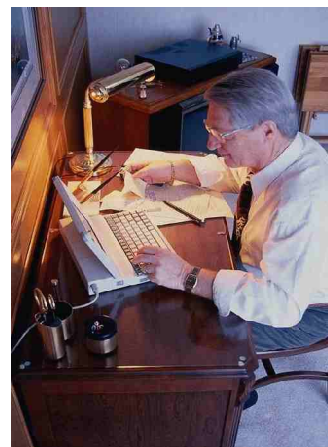
Estuary Restoration Act: \$2.0 million

NOAA requests a total of \$2.0 million for the Estuary Restoration Act. This investment will allow for NOAA-wide activities mandated by the Estuary Restoration Act of 2000. NOAA will work with other partners to implement a national estuary habitat restoration strategy designed to ensure a comprehensive approach towards habitat restoration projects. Healthy estuarine ecosystems provide a number of benefits pertaining to wildlife habitat, commercial and recreational fisheries, water quality, flood control, erosion, and outdoor recreation. NOAA's activities include the development of scientifically sound monitoring protocols and standards for coastal habitat restoration projects throughout the United States and its protectorates. NOAA will develop restoration databases that provide quick and easy access to accurate and up to date information regarding all projects funded under the Estuary Restoration Act of 2000. This work will provide scientists and resource managers with information critical to successful estuary habitat restoration efforts.



Commerce Administrative Management System: \$19.8 million

NOAA requests a total of \$19.8 million for the Commerce Administrative Management System (CAMS). This investment will allow for the full benefit and value of CAMS to be realized in NOAA. CAMS is in the final stages of completion, expected in FY 2003, and adequate funding will ensure that CAMS is deployed in a timely manner, allowing all modules to progress toward completion. Once fully deployed, CAMS will contribute in significant ways to maintaining a clean NOAA financial audit through systematic controls rather than through labor-intensive manual efforts. It will provide managers with on-line, real-time, and accurate financial information in support of their programmatic missions, and will be legally compliant. Requested funding for CAMS is vital to preserve NOAA's ability to have a satisfactory financial accounts system and allow NOAA and DOC to meet statutory obligations under the Federal Managers' Financial Integrity Act (FMFIA) and the Chief Financial Officer Act (CFO Act).



Marine Services: \$63.8 million

The total request of \$63.8 million for Marine Services represents an increase of \$1.9 million above the FY 2001 Enacted level. This continued investment will allow NOAA to operate its fleet of 15 vessels capable of safely collecting hydrographic and coastal assessment data, conducting fishery independent scientific and survey operations, and conducting sustained oceanographic and atmospheric data collection in various marine environments and provides funds for outsourcing to meet some data-collection requirements. The request includes an increase of \$1.0 million to provide days-at-sea, primarily through University-National Oceanographic Laboratory System (UNOLS) and charter vessels, to support research in the Gulf of Mexico concerning the interactions of the Mississippi River plume, nutrient loading, and



resulting effects of hypoxia on Gulf fisheries. These funds will also maintain or increase day-at-sea levels supporting other NOAA programs, including the science programs in NOS and the sanctuary program. The request also includes an increase of \$0.9 million which will be used to pay the increased costs for operating the ADVENTUROUS' and to add days-at-sea on fisheries research vessels. The ADVENTUROUS, which will replace the TOWNSEND CROMWELL, is a larger and more capable vessel that will carry more scientists and complete more research on a daily basis.

NOAA's Budget and Financial Management

NOAA's FY 2000 Unqualified Financial Audit

For the Fiscal Year 2000, NOAA received an unqualified opinion on NOAA financial statements from an independent auditor. The FY 2000 audit represents the second consecutive year NOAA has received a clean audit and demonstrates the intensive efforts made by NOAA to improve financial management. NOAA continues to place a high priority on improving fiscal and financial management in order to increase accountability and efficiency.

NOAA's Budget Restructuring Efforts

Over the past several years, NOAA has been working to respond to Congressional concerns stemming from the NOAA budget structure. The Congressional Appropriation Committees have challenged NOAA to make recommendations to simplify its budget structure. NOAA has taken several actions that address the restructuring of its budget and financial management processes. The outcome of these actions is already apparent and demonstrated in its improved budgetary communications as well as in the improved accuracy of its documentation (e.g., sustaining a clean audit and improved timeliness in the distribution of funds). NOAA continues to work toward meeting the challenges of restructuring the NOAA budget and is excited about the improved efficiency a new budget structure will bring.



Conclusion

As evidenced by NOAA's improving financial and budgetary management, NOAA is doing its part to exercise fiscal responsibility as stewards of the Nation's trust as well as America's coastal and ocean resources. And, in the same way that NOAA is responsible for assessing the Nation's climate, we are responsible for assessing our management capabilities. It is within this broader management context that NOAA continues looking for opportunities to improve. As in past years, NOAA's FY 2002 Budget Request includes measures which track results to the level of public investment. NOAA will continue to leverage its programs and investments by developing those associations that most efficiently and economically leverage resources and talent, and that most effectively provide the means for successfully meeting mission requirements.



Total Request: \$394,609,000¹

ORF: \$364,486,000

PAC: \$27,905,000

Coastal Zone Management Fund: [\$3,000,000]

Environmental Improvement and Restoration Fund (EIRF): \$5,218,000

The National Ocean Service (NOS) is the primary Federal agency working for the coast through the observation, measurement, assessment, and management of the Nation's coastal and ocean areas, as well as conducting response and restoration activities to protect vital coastal resources. More than 139 million people – over 50 percent of the national total – currently reside along the narrow coastal fringes. The population in these coastal areas is expected to increase to about 165 million by the year 2015. This population growth and development places many of the Nation's coastal areas under increasing pressure. Growth in coastal areas creates jobs, generates economic prosperity, adds new industries, enhances educational opportunities, and increases tax revenues. However, it also burdens local environments, threatening the very resources that draw people to the coast.

As a national leader for coastal stewardship, NOS promotes a wide range of research activities to create the strong science foundation required to advance the sustainable use of our precious coastal systems. NOS contributes significantly to achieving four of NOAA's seven Strategic Plan Goals: Sustain Healthy Coasts, Promote Safe Navigation, Build Sustainable Fisheries, and Recover Protected Species. NOS provides improvements in the quality, quantity, geographic distribution, and timeliness of ocean and coastal observations. Mapping, charting, geodetic, and oceanographic activities produce marine and coastal data to increase the efficiency and safety of marine commerce and support coastal resource management. NOS protects and restores coastal resources injured by releases of oil and other hazardous materials. NOS also manages marine sanctuaries and, in partnership with the coastal states, helps manage the Nation's valuable coastal zones and nationally significant estuarine reserves. Understanding of the coastal environment is enhanced through coastal ocean activities which support science and resource management programs.

¹ The total request for NOS of \$394,609,000 does not include the general offset from the CZM Fund of \$3,000,000 in FY 2002.

NOS' role as a leader in coastal stewardship supports many of the recommendations contained in the report: "Turning to the Sea: America's Ocean Future." These recommendations help provide the framework for a comprehensive ocean agenda which will guide Federal efforts into the 21st Century. To meet the challenges posed in the report, NOS seeks increases under the Coastal Conservation Activities,

Modernization of Marine Transportation System (MTS), and People and Infrastructure Initiatives. These increases will help strengthen the understanding and protection of our valuable ocean resources and foster our Nation's economic competitiveness.

Increases are proposed as part of the Coastal Conservation Activities Initiative. Under this initiative, an increase is requested to expand Coastal Zone Management grants to enable coastal states to address such issues of national importance as the impact of coastal storms, declining water quality, shortage of public shoreline access, loss of wetlands, deteriorating waterfronts, and the challenge of balancing economic and environmental demands in the coastal zone. Increases are also requested to enhance our ability to effectively manage the National Marine Sanctuaries, intensify habitat protection through the National Estuarine Research Reserve System and strengthen and improve marine protected area (MPA) programs and their conservation goals through improved Federal, state, local, tribal, and territorial coordination and collaboration to fill shared information, technical and operational needs.

Increases are proposed to address the recommendations of the Marine Transportation System (MTS) report. The MTS initiative will modernize the Nation's suite of nautical charts, and enhance the coastal water level observation system and the geodetic positioning reference system needed to ensure safe navigation. NOAA also requests increases to maintain and improve the scientific expertise to respond to hazardous releases when they occur and restore damaged coastal resources. NOAA also proposes to begin a pilot project to better address the impacts of coastal storms on maritime users and communities. NOAA's integrated suite of surveying, charting, water level, and positioning services is capable of increasing the efficient movement of goods while significantly reducing the risk of marine accidents and resulting environmental damage. Economic benefits include reducing vessel fuel consumption and port pollution, supporting just-in-time delivery of goods, enhancing the competitiveness of U.S. exports, and restoration of important coastal resources that support tourism, fishing, and other ocean and coastal-dependent industries.

Significant Adjustments-to-Base (ATBs)

NOAA requests a net decrease of \$8.9 million for ATBs which reflects increases for inflationary costs, technical adjustments (both increases and decreases), restoration of the FY 2001 rescission and terminations.

Mandatory Pay, Inflationary Costs, and Adjustment: -\$8.9 million

NOAA requests an increase for NOS of \$7.3 million to address essential ATBs for the NOS base operations and system account. This will fund the FY 2002 federal pay raise of approximately 3.6% and annualize the FY 2001 pay raise of 3.8% as well as provide inflationary increases for certain non-labor activities, including service contracts, and rent charges from the General Services Administration (GSA). Funding for these cost increases is critical for NOS to maintain adequate services to the Nation.

Other Adjustments-to-Base include two technical ATBs: a \$19.2 million technical decrease ATB transfer of days-at-sea to NOAA Program Support now consolidated within OMAO, and a technical adjustment increase of \$3.0 million related to the Coastal Zone Management Fund.

Restoration of FY 2001 Rescission: \$0.8 million

NOAA requests an increase of \$0.8 million to restore the FY 2001 rescission. Restoration of these funds in FY 2002 is required to sustain NOS navigation, science and coastal and ocean management service to the Nation. In FY 2002, NOS will restore funding to provide critical training for staff, grants to states, and support for research and navigation services.

Terminations: -\$47.7 million

NOAA requests a decrease of \$47.7 million to reflect the discontinuation of many programs including: the Seacoast Science Center (\$1.3 million), Louisiana Brown Marsh Restoration (\$2.9 million), South Carolina Pfiesteria Research (\$0.5 million), New Hampshire Marsh Restoration (\$1.0 million), River Restorations (Dupage River, Detroit River, and Lower Rouge River - \$11.5 million), Great Lakes Community Restoration Grants (\$30.0 million) and the Northwest Straits Citizens Advisory Committee (\$0.5 million).

Detailed Program Increases by Sub-Activity

Operations, Research and Facilities (ORF)

Navigation Services

\$106.7 million

The total requests of \$106.7 million for Navigation Services represents a net increase of \$10.5 million above the FY 2001 Enacted level. The FY 2002 Presidents Budget funds a suite of navigation products and services that help ensure the safety of marine transportation, while improving the economic efficiency and competitiveness of U.S. commerce. This suite includes traditional products and services, such as paper charts and tide predictions, as well as powerful new electronic navigation charts and real-time oceanographic systems. This subactivity also supports the National Spatial Reference System (NSRS), a highly accurate and accessible geographic positioning framework which underpins a wide array of defense, transportation, public works, earth science, mapping and charting, and other activities critical to the Nation's economic infrastructure. Included in this subactivity is funding (at FY 200 levels) for the NOAA/University of New Hampshire Joint Center for Hydrographic Excellence (\$2.6 million), the Height Modernization implementation activities in conjunction with states of California and North Carolina (\$1.0 million per state), and \$20.5 million to reduce the hydrographic survey backlog. One-time funding for the Seacoast Science Center of \$1.3 million is not included.

The Navigation Services base had a net increase of \$2.9 million due to program terminations, restoration of the FY 2001 rescission and receipt of ATBs to cover non-avoidable increases for employee pay, rent and other charges.

Mapping and Charting: \$45.2 million

Electronic Navigational Charts: \$3.6 million

NOAA requests an increase of \$3.6 million for Electronic Navigational Charts. This investment is to construct additional Electronic Navigational Charts (ENCs), enhance existing ENCs to provide a more complete picture of the waterway, and provide for the continued maintenance of the completed ENCs (an estimated 200 in maintenance at the end of FY 2002). The ENC is a significant component of NOAA's integrated *systems approach* to the development and delivery of navigation services designed to provide the essential information required to navigate safely in and out of the Nation's ports and harbors. In support of ENC funding will be used to continue efforts to provide complete, quality-controlled digital bathymetric coverage of U.S. waters using the most up-to-date hydrographic survey data available. The bathymetric database will be used for navigation purposes as well as to assist in developing hydrodynamic, water quality, and ecosystem models to assess the Nation's coastal environment.

Shoreline Mapping: \$1.0 million

NOAA requests an increase of \$1.0 million for Shoreline Mapping building on the \$1.5 million appropriated in FY 2001. This investment will provide a more accurate national shoreline building on the \$1.5 million appropriated in FY 2001. Presently, one-third of the U.S. shoreline has never been mapped by NOAA. At the present rate of progress, the entire U.S. shoreline is projected to be surveyed on a 50-year cycle. An increased emphasis on shoreline is required to keep pace with the growing stress on our Nation's Marine Transportation System. NOAA has determined that in order to adequately maintain the national shoreline and support safe navigation, a 5-year average cycle is needed to resurvey those portions of the shoreline deemed critical, with the remaining areas requiring mapping on a 10-year average cycle. The FY 2002 increase will enable NOAA to maintain the critical port areas and to start addressing other less-critical coastal areas on a 5-year refreshment cycle, moving toward a 10-year refreshment cycle in those areas. Most of this work would be accomplished through contracts with the private sector.

Coastal Storms: \$1.0 million

NOAA requests \$1.0 million for this portion of Coastal Storms. This investment will allow NOAA's Coastal Storms effort to concentrate NOAA capabilities on environmental monitoring, hazard mitigation, education and outreach as part of the Coastal Storms pilot project in Florida. Billions of dollars are lost each year to disasters in coastal states or territories. This increase complements the increases requested in the Tides and Currents line item and the Ocean Resources Conservation and Assessment subactivity. NOAA's Coastal Storms proposal seeks to apply a cross-section of NOAA capabilities to: ensure the safety of the coastal population, support and enhance the coastal economy and sustain the environmental health of coastal communities and resources.

Investments in FY 2002 will provide NOAA with resources to collect crucial baseline data in bathymetric mapping, water levels, and other environmental variables in the Florida pilot region. These data are being acquired to meet the increasing demands of emergency managers, resource managers, and Marine Transportation System users who require up-to-date bathymetric mapping products to deal with storm surge, pollution plumes, resource conflicts and safe shipping. Funding will also be used to develop a

prototype hydrodynamic model for the St. Johns River which will go beyond current Physical Oceanographic Real-Time Systems (PORTS) technology, providing commercial shippers with the data needed to take full advantage of oceanographic conditions to maximize cargo shipping and profits and avoid accidents. With continued support, NOAA plans to expand Coastal Storms to other demonstration regions in future years.

Geodesy: \$23.8 million

The total request of \$23.8 million for Geodesy represents an increase of \$1.5 million above the FY 2001 Enacted level.

National Spatial Reference System (NSRS): \$0.5 million

NOAA requests an increase of \$0.5 million for activities required to improve and maintain the National Spatial Reference System (NSRS). This effort will focus primarily on providing better access to accurate and consistent height data in support of differential Global Positioning System (GPS) applications. Improved access to accurate NSRS information by the marine transportation community and many other economic activities which derive significant safety and economic benefits from accurate and timely spatial reference data. In addition, NOAA will provide selected ports with a suite of geodetic tools to enhance the capacity of the port, maximize economic efficiencies, and reduce accident potential and environmental damage.

Tide and Current Data: \$17.3 million

The total request of \$17.3 million for Tide and Current Data represents an increase of \$2.2 million above the FY 2001 Enacted level.

Coastal Storms Initiative: \$1.0 million

NOAA requests an increase of \$1.0 million for this portion of the Coastal Storms Initiative, described above. This increase is to enhance existing NOAA National Water Level Observation Network (NWLON) stations and existing water level networks of local partners located within the Coastal Storms pilot region. NWLON is an important component of our Nation's marine transportation infrastructure. The enhanced stations will be improved through the addition of meteorological and oceanographic sensors, the completion of ties to the geodetic datum through GPS surveys, and the addition of current meters at key locations.

Forecast Models: \$0.5 million

NOAA requests \$0.5 million for implementation of Forecast Models. A recent comprehensive assessment of NOAA's tidal current prediction products shows major gaps and deficiencies for the Nation's ports and harbors. This investment is requested to enhance tides and tidal current services to the user by obtaining new current meter measurements at locations critical to the navigation community. The new data will be used in the design of future PORTSTM and in the calibration and validation of hydrodynamic models for development of nowcast/forecast products of water conditions critical for supporting increasing marine commerce and safe navigation. NOAA will also enhance real-time services

to the user by building an oceanographic modeling program to meet the increasing demand for real-time and forecasted water level and other oceanographic products.

Ocean Resources Conservation and Assessment

\$117.1 million

NOAA requests a total of \$117.1 million for this subactivity for FY 2002, a net decrease of \$7.5 million from the FY 2001 Enacted level. This investment will support ocean and coastal monitoring and assessment, responses to oil and hazardous materials spills, and directed research programs to provide comprehensive scientific information for decisions about the protection and sustainable use of coastal and ocean resources. These activities also help minimize damages to natural resources in the Nation's coastal areas, estuaries, and oceans, including the Great Lakes. Included in this subactivity is continued support for the Cooperative Institute for Coastal and Estuarine Environmental Technology, a joint NOAA-University of New Hampshire Institute, at the FY 2001 Enacted level of \$5.8 million, the JASON project, at the Enacted level of \$2.5 million, and the Coastal Services Center at \$18.9 million. Also included is continuing support for NOS coral reef activities (\$14 million) and for coral reef studies in Hawaii and the Southeast (\$1.0 million for Hawaii, \$0.5 million for Florida and \$0.5 million for Puerto Rico), and funding for grants through the National Fish and Wildlife Foundation is maintained at \$1.0 million. One time funding in FY 2001 for Louisiana Brown Marsh Restoration (\$2.9 million) and the South Carolina Pfiesteria Research (\$0.5 million) are not requested in FY 2002. Additionally, no funds are requested to continue the FY 2001 projects: New Hampshire Marsh Restoration (\$1.0 million), and River Restorations (Dupage River, Detroit River, and Lower Rouge River - \$11.48 million).

A net decrease of \$12.5 million from the FY 2001 Enacted level was realized in the Ocean Resources Conservation and Assessment base after program terminations, restoration of the FY 2001 rescission and receipt of ATBs to cover non-avoidable increases for employee pay, rent and other charges.

Ocean Assessment Program: \$72.1 million

The total request of \$72.1 million for Ocean Assessment Program represents a decrease of \$0.7 million below the FY 2001 Enacted level.

Coastal Storms: \$1.0 million

NOAA requests \$1.0 million for this portion of Coastal Storms. This investment complements the increases requested in the Navigation Services subactivity to predict and reduce the watershed impacts of Coastal Storms. The new funding will allow NOAA to better provide capabilities to handle of coastal storm events by developing improved products and services that address specific state/local decision-maker needs. The Coastal Storms initiative will start to build an enhanced, seamless “observation-to-user” capability that provides accessible data and information, value-added tools, and training for users in regards to the impacts of coastal storms.

Response and Restoration: \$16.8 million

The total request of \$16.8 million for Response and Restoration represents a decrease of \$7.3 million below the FY 2001 Enacted level.

Spill Response and Habitat Restoration: \$2.0 million

The total request of \$2.0 million for Spill Response and Habitat Restoration represents an increase of \$2.0 million above the FY 2001 Enacted level. This investment will strengthen the capabilities of NOAA and its partners to protect and restore coastal resources under the Oil Pollution Act and CERCLA (Superfund), and improve NOAA's prevention and response capabilities. NOAA will develop and distribute tools and guidance to assist decision-makers tasked with protecting and restoring coastal resources impacted by contaminants, while also expanding its work at clean-up sites around the country. Increased funding will also enable NOAA to more accurately gauge the effectiveness of its spill response measures, leading to improved methods of restoring injured resources.

Estuary Restoration Act: \$2.0 million

The total request of \$2.0 million for Estuary Restoration Act represents an increase of \$2.0 million above the FY 2001 Enacted level. This investment will support agency-wide activities mandated by the Estuary Restoration Act of 2000. NOAA will work with other partners to implement a national estuary habitat restoration strategy designed to ensure a comprehensive approach towards habitat restoration projects. NOAA's activities include the development of scientifically sound monitoring protocols and standards for coastal habitat restoration projects. In addition, NOAA will develop restoration databases that provide quick and easy access to accurate and up to date information regarding all projects funded under the Estuary Restoration Act of 2000, as well as information on projects throughout the country that meet the standards established as a part of the Act for monitoring and data collection. This work will provide scientists and resource managers with information critical to successful estuary habitat restoration efforts.

Ocean and Coastal Management**\$140.7 million**

The total request of \$140.7 million for Ocean and Coastal Management represents a net decrease of \$9.5 million from the FY 2001 Enacted level. This investment supports the coastal states and territories in implementing Federal partnership programs that promote sustainable use of the Nation's coastal zone, and designating and managing unique and nationally significant marine and estuarine areas. Funding for the Nonpoint Pollution Control Implementation Grant program is continued at the FY 2001 Enacted level of \$10.0 million. Funding of \$29.9 million for the Great Lakes Community Restoration Grants program is not included, nor is funding of \$0.5 million for the Northwest Straits Citizens Advisory Committee.

The Ocean and Coastal Management base shows a net decrease of \$27.1 million below the FY 2001 Enacted level after program terminations, restoration of the FY 2001 rescission and receipt of ATBs for non-avoidable cost increases.

CZM Administration: \$6.4 million

The total request of \$6.4 million for Coastal Zone Management Administration represents an increase of \$0.4 million from FY 2001 Enacted levels. In addition, in order to streamline administrative processes, NOAA proposes to consolidate all funding for Program Administration under ORF, requiring replacement of the \$3.2 million that had been transferred from the CZM Fund in prior years. In FY 2002, the CZM Fund is proposed as a general offset to CZM Act activities. The CZM Administration funds are requested to support NOAA's National program administration responsibilities under the Coastal Zone Management Act (CZMA), which continue to grow. The increase will assist NOAA's ability to bring together representatives from state, Federal, and tribal governments and the private sector, and to conduct outreach to coastal decision-makers and the public to address issues such as coastal hazards, habitat and polluted runoff. It will enable NOAA to meet the increasing requests of the states (33 in the program, one state program in development) for support and technical assistance. The increase will also enable NOAA to address National support for the 25 existing and 2 proposed National Estuarine Research Reserves.

Coastal Zone Management Grants: \$69.0 million

The total request of \$69.0 million for Coastal Zone Management Grants represents an increase of \$8.6 million from FY 2001 Enacted levels. This continued investment will provide direct support to coastal states for implementing and improving their approved coastal management programs. Currently 33 of the 35 eligible coastal states have an approved coastal management program, with approval of the 34th state program, Indiana, expected in FY 2002. Combined, these programs serve to manage and protect 99.9% of the Nation's shoreline to the benefit of the environment and the economy. This increase would provide resources for coastal states to more fully implement their coastal management plans and assist states in enhancing their management programs through implementation of Enhancement Strategies under Section 309 of the Coastal Zone Management Act (CZMA).

The Coastal Zone Management Program is a Federal-state partnership which works to ensure the wise use of coastal resources for the benefit of the entire nation and which allows coastal states and communities to address issues of coastal resources and development. The CZMA provides grants to coastal states and territories to address issues of national importance such as the impact of coastal storms and flooding, declining water quality, shortage of public access to the shoreline, loss of wetlands, deteriorating waterfronts and harbors, and the challenge of balancing economic and environmental demands in increasingly competitive ports.

National Estuarine Research Reserves: \$16.4 million

The total request of \$16.4 million for National Estuarine Research Reserves operations represents an increase of \$1.7 million from FY 2001 Enacted levels. This continued investment will improve the ability of NOAA and its state partners to understand, manage, and protect coastal habitats and biodiversity. The NERRS is a network of protected areas established to improve the health of the Nation's estuaries and coastal habitats through long-term research and protection, and to address such issues as water quality, loss and degradation of habitat, and loss of species biodiversity. The increase will significantly enhance the monitoring and training programs at the 25 designated reserves, and ultimately lead to healthier estuaries, coastal water quality, and fisheries. Funding will also support the two new sites in development in California and New York.

NOAA and state reserve staff will continue to expand the System-Wide Monitoring Program (SWMP) by increasing spatial coverage of water quality stations, and by monitoring additional biological indicators. The SWMP is a national monitoring system that will integrate water quality, biological, and land-cover change elements, making the information available to scientists managers. Reserve staff will also improve estuarine resource management by providing enhanced technical training for planners, policy-makers, and other state and local coastal decision-makers by focusing on water quality, habitat, invasive species, and sustainable ecosystem issues. Funding of \$9.9 million is requested in the PAC account to complement these activities by providing resources for research, education, and visitor facilities at the various reserve sites.

Marine Sanctuary Program: \$36.0 million

The total request of \$36.0 million for the National Marine Sanctuary Program (NMSP) operations represents an increase of \$3.6 million from FY 2001 Enacted levels. This continued investment will allow for upgrading the operating and technical capacity in the thirteen national marine sanctuaries. Congress has required NOAA to invest in providing adequate resources for the management and protection of existing sanctuaries prior to designating new sanctuary sites. The Congress has called for sufficient resources for operational staff, facilities and equipment, effective implementation of management plans, enforcement, and particularly for site characterization including cultural resources and inventory of existing natural resources. The FY 2002 increase will those efforts, which will improve protection of important sanctuary resources, including coral reefs, endangered marine mammal, sensitive habitats, and significant cultural resources.

Specifically, funds will be used to hire personnel at the Channel Islands and Thunder Bay Sanctuaries, provide vessel time to conduct deep water ocean research, implement management changes and new regulations. NOAA will use vessels and aircrafts to inventory natural and cultural resources at all thirteen sanctuaries, and the Northwest Hawaiian Islands coral reserve including activities conducted under the Sustainable Seas Expeditions.

Marine Protected Areas Program: \$3.0 million

NOAA requests a total of \$3.0 million for Marine Protected Areas. This investment will strengthen and improve agency-wide Marine Protected Area (MPA) programs and their conservation goals. This effort supports NOAA's responsibilities for fulfilling the National Marine Sanctuaries Program, National Estuarine Research Reserve Program, Coastal Zone Management Program, and coral reefs. This funding will foster collaboration with the Department of the Interior and other Federal agencies, state, local, tribal and territorial governments as well as non-governmental partners. Efforts will focus on developing a supporting framework for effective communication and collaboration among MPA programs by creating a national system of marine protected areas including NMS, NERRS, and other Federal, state, and tribal marine protected areas. These funds will also support preparation of the first comprehensive inventory and assessment of the existing system of U.S. MPAs. The NOAA MPA Program will consist of a Marine Protected Areas Center, comprised of a small core staff in Washington, DC and two regional Institutes of Excellence.

Acquisition of Data

All funding for this program has been transferred to the Office of Marine and Aviation Operations

(OMAO) under the Marine Operations subactivity. The transfer of these activities to OMAO will allow for the management of the fleet operations as a NOAA-wide asset. The NOAA fleet and charter vessels provide NOS with collection of hydrographic and coastal assessment data through days-at-sea for programs of significant National interest.

Procurement, Acquisition and Construction (PAC)

National Ocean Service

\$27.9 million

NOAA requests a total of \$27.9 million in the PAC account for NOS, a decrease of \$37.9 million from FY 2001 Enacted levels.

Beaufort Lab Repairs: \$1.0 million

NOAA requests \$1.0 million for critically needed renovations at the Center for Coastal Fisheries Habitat Research in Beaufort, North Carolina to address sewage waste problems and major electrical repairs.

Coastal Services Center: \$1.0 million

NOAA requests \$1.0 million for the Coastal Services Center in Charleston, South Carolina to partially demolish some of the obsolete and deteriorating structures that pose safety hazards and to begin an expansion of the facility to provide additional office spaces, a storage area and loading dock.

National Marine Sanctuary Program: \$16.0 million

NOAA requests total funding of \$16.0 million for the National Marine Sanctuary Program, \$13.0 million above FY 2001 Enacted levels, that will begin the implementation of a facilities plan that prioritizes needs and opportunities at individual sites in order to construct visitor centers and conduct collaborative education projects. This linked network of interpretive facilities will actively engage the public in the spirit of ocean exploration and discovery and includes sites in the Florida Keys, Hawaii, Massachusetts, Georgia, and California.

National Estuarine Research Reserve: \$9.9 million

NOAA request \$9.9 million total requested for the NERRS, a decrease of \$28.0 million below FY 2001 Enacted levels, will provide protection of key estuarine habitats (i.e., wetlands and other habitat slated for development; threatened and endangered species habitat; areas for habitat restoration; etc.) through state land acquisition and construction of facilities for existing and new reserves. Improved or expanded NERRS facilities will provide needed visitor, research and education centers and interpretive exhibits for visitor access and resource protection.

Other Accounts

Coastal Impact Assistance Fund (CIAF)

NOAA does not request funding to continue the Coastal Impact Assistance Fund. NOAA had to make hard choices to meet efforts to slow government growth. NOAA already has Coastal Zone Management grants (for which NOAA is requesting an increase in FY 2002) for all 33 eligible states which address many of the same issues. The CIAF was targeted at only seven states.

Coastal Zone Management Fund (CZMF) [Offset to ORF]

The Coastal Zone Management Fund was established by the Coastal Zone Reauthorization Amendments of 1990. The fund consists of loan repayments from the former Coastal Energy Impact Program. The proceeds are to be used to offset the ORF account for the costs implementing the Coastal Zone Management Act of 1972, as amended. As part of this transfer, 49 FTE will be moved to the CZM Administration line in ORF. Due to declining loan repayments into the fund, this amount will be only \$3.0 million, \$0.2 million less than in FY 2001.

Environmental Improvement and Restoration Fund (EIRF): \$5.2 million

NOS requests a total of \$5.2 million of a total NOAA request of \$10.4 million for the Environmental Improvement and Restoration Fund (EIRF). The other half of the EIRF is described under the National Marine Fisheries Service. The EIRF was created by the Department of Interior and the Related Agencies Act of 1998 for the purpose of carrying out marine research activities in the North Pacific. The EIRF provides funds for the purpose of carrying out marine research activities in the North Pacific. These funds will provide grants to Federal, State, private or foreign organizations or individuals to conduct research activities on or relating to the fisheries or marine ecosystems in the North Pacific Ocean, Bering Sea, and Arctic Ocean.



National Marine Fisheries Service

Total Request: \$734,211,000

ORF: \$598,036,000

PAC: \$14,700,000

Fishermen's Contingency Fund: \$952,000

Foreign Fishing Observer Fund: \$191,000

Fisheries Finance Program: \$287,000

Promote & Develop: \$4,828,000

Pacific Coastal Salmon: \$90,000,000

Pacific Salmon Treaty: \$20,000,000

Environmental Improvement & Restoration Fund: \$5,217,000

The National Marine Fisheries Service (NMFS) is responsible for the management and conservation of living marine resources within the United States' Exclusive Economic Zone. NMFS also provides critical support and plays a key advisory role in the management of living marine resources in coastal areas under state jurisdiction, provides scientific and policy leadership in the international arena, and implements internationally agreed-upon conservation and management measures. Through science-based conservation, management actions aimed at sustaining long-term use, and promoting of the health of coastal and marine ecosystems, benefits to the Nation from the use of living marine resources are maximized. Programmatic authorities for NMFS' fisheries management, protected species, and habitat conservation activities derive primarily from the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), the Sustainable Fisheries Act (SFA), the Marine Mammal Protection Act (MMPA), and the Endangered Species Act (ESA). Other acts provide additional authorities for enforcement, seafood safety, habitat restoration, and cooperative efforts with states, interstate fish commissions, and other countries. All these activities rely on a strong scientific and research competency to support the challenging public policy decision process associated with this stewardship responsibility.

Fisheries Modernization. When NMFS' predecessor (the Bureau of Commercial Fisheries) was

incorporated into NOAA 30 years ago, no one predicted the current complexity of living marine resource stewardship. Maximizing the value - commercial, recreational, intrinsic, and ecological - of living marine resources to the Nation in the 21st Century requires NMFS to take a fresh approach to its stewardship role and make basic changes in the way it conducts business. The FY 2002 *Fisheries Modernization* initiative begins this change. NMFS proposes a long-term commitment to improve its structure, processes, and business approaches to meet its mission of sustaining the Nation's living marine resources and their habitat. This initiative will improve NMFS' science, management, and enforcement programs and begin to rebuild its aging infrastructure. These improvements will result in measurable progress in rebuilding or rehabilitating and sustaining the biological and economic health of fisheries and protected species in the United States. Increased funding for improved data collection by NMFS and its industry and state partners, more accurate stock assessment models, and better management processes that synthesize information into successful public policies is essential to achieving its legislative mandates of building sustainable fisheries, restoring healthy coastal ecosystems, and enhancing the recovery of protected species.

For FY 2002, NMFS requests a total of \$734.2 million, \$598.0 million in the ORF account, \$14.7 million in the PAC account, and \$121.5 million in other related accounts. The ORF total includes an increase of 60 FTE and a decrease of \$36.0 million from the FY 2001 Enacted level.

Significant Adjustments-to-Base

Mandatory Pay and Inflationary Costs: \$11.2 million

NOAA requests an increase of \$11.2 million to fund Adjustments-to-Base (ATBs) for NMFS base activities. The increase will fund the FY 2002 federal pay raise of 3.6% and annualize the FY 2001 pay raise of 3.8%. The increase will also provide mandatory inflationary increases for non-labor activities, including service contracts, field office lease payments, and rent charges from the General Service Administration (GSA).

Adjustments: -\$26.8 million

The NMFS base was also adjusted to transfer \$26.8 million for NMFS Acquisition of Data to the Office of Marine and Aviation Operations under the Marine Operations subactivity.

Restoration of FY 2001 Rescission: \$1.2 million

NOAA requests an increase of \$1.2 million to restore the FY 2001 rescission. Restoration of these funds in FY 2002 is required to sustain NMFS current services.

Detailed Program Increases by Sub-Activity

Operations, Research, and Facilities (ORF)

Information Collection and Analysis

\$273.8 million

The total request of \$273.8 million represents an increase of \$18.5 million over the FY 2001 Enacted level for this subactivity. The goal of this budget subactivity is to provide accurate and timely analyses of the biological, ecological, economic, and social aspects related to the use of the Nation's living marine resources. This information is provided through various research, stock assessments, and data collection activities conducted by NMFS, states, interstate commissions, universities, and the industry. Also included are activities to: determine the impacts of the incidental taking of marine mammals and endangered species in fishing operations; develop forecast models for marine resource populations, ecosystems, and fishery systems; improve the quality and timeliness of information on living marine resources, and their habitats.

Resource Information

\$200.8 million

The total request of \$200.8 million reflects an increase of 19 FTE and \$7.6 million over the FY 2001 Enacted level for Resource Information. This level of funding will continue to support many of the programs funded in FY 2001 including: \$4.3 million for west coast groundfish research, \$7.3 million for Magnuson-Stevens Act implementation activities, \$3.4 million for Chesapeake Bay research, \$0.3 million for Southeastern sea turtle research and recovery, and \$8.3 million for red snapper research. Funding within Resource Information to address Steller sea lion recovery is continued at \$29.3 million (additional funding for Steller sea lions is included in the Fisheries Management Programs line). Below are details outlining the increases within the FY 2002 request for Resource Information:

- **Expand annual stock assessments: \$15.0 million**

The total request of \$15.0 million represents an increase of 19 FTE and \$13.3 million above the FY 2001 Enacted level. Funding will provide for additional data collections to improve NMFS' ability to make accurate, timely stock predictions around the country. Funding at this level would add 829 chartered ship days toward the gap of 2,564 days identified in the NMFS Stock Fisheries Data Acquisition Plan as needed for adequate stock assessment coverage. The additional 829 charter ship days would provide 2,265 charter days at sea. Within this total amount is an increase of \$1.0 million to specifically enhance the assessment of marine mammal population status and trends as required by the Marine Mammal Protection Act.

- **Fisheries oceanography: \$1.5 million**

The total request of \$1.5 million for fisheries oceanography represents an increase of \$1.5 million over the FY 2001 Enacted level. Funding will better enable NMFS to assess how long-term environmental factors affect fish stocks, thereby identifying the causes of population fluctuations and improving stock predictions. This program provides an ecosystem context for measuring and predicting population health of species within the ecosystem (e.g., fish and marine mammals), and

to model and forecast how these populations respond to environmental and climate changes.

- **South Florida: \$1.9 million**

The total request of \$1.9 million for South Florida represents an increase of \$0.6 million over the FY 2001 Enacted level. Funding will be used to expand research and monitoring activities in South Florida. As a result of the U.S. Army Corps of Engineers construction projects within the Florida Everglades, NMFS must monitor the impact of inland restoration efforts and the changing freshwater inflow on Florida Bay habitats, nutrient flow, hydrodynamics, and ultimately on measurable ecosystem productivity and health.

- **Aquaculture: \$1.0 million**

The request of \$1.0 million for aquaculture is needed to conduct activities that support the development and implementation of a code of conduct for responsible aquaculture in the Exclusive Economic Zone that will improve the regulatory framework for aquaculture. NMFS will address the important environmental aspects of aquaculture and enhancement activities by developing and implementing environmental monitoring programs, investing in science and technology, and increasing work in the non-indigenous species area, especially for shrimp viruses.

- **Pacific highly migratory species: \$1.0 million**

The request of \$1.0 million will address this growing and critical research need as a new regional council Fishery Management Plan for these species is developed. Among the specific tasks to be undertaken are:

- conduct stock assessments and biological studies for four major tuna species, and three species of sharks;
- address issues affecting management policy choices such as fleet capacity and compliance;
- implement research, monitoring, and management measures under the West Coast Highly Migratory Species Fishery Management Plan;
- conduct research to evaluate the extent of bycatch and effectiveness of mitigation measures in purse seine fishing using fish aggregating devices;
- develop and implement assessment methodology tailored for highly migratory species.

- **Southeast Cooperative Research: \$3.0 million**

The total request of \$3.0 million represents an increase of \$0.5 million over the FY 2001 Enacted level for Southeast cooperative research activities. This program, as well as the National program funded within Resource Information and the Northeast Cooperative Research program funded under the Fisheries Management Programs subactivity involves fishermen in designing and conducting research programs utilizing the expertise and insights of people who have been close to the environment for the duration of their career - fishermen - in resource survey design and interpretation. These cooperative efforts also work to dispel some of the misperceptions of the methods employed by government scientists responsible for providing scientific advice for fisheries management. Working together to design and implement data collection programs helps all involved parties and strengthens the resultant product. NMFS is addressing regional issues and species-specific needs in various programs around the country through these cooperative programs.

Fishery Industry Information

\$47.1 million

The request of \$47.1 million for Fishery Industry Information represents an increase of \$9.6 million over the FY 2001 Enacted level. Below are details outlining the FY 2002 request for Fishery Industry Information:

- **Fish Economics and Statistics research: \$3.4 million**

The total request of \$3.4 million for Fish Economics and Statistics research represents an increase of \$1.4 million over the FY 2001 Enacted level. This funding will increase NMFS' capability to conduct economic and social assessments of policy alternatives by improving the economic and social science staff capability, and initiation of data and applied research programs. The outcome will enable NMFS to evaluate and predict the economic and community impacts of policy alternatives, and satisfy statutory, regulatory and Executive Order requirements for assessing the benefits and costs of fisheries management and endangered/protected species management actions. This will help close economic and social science vulnerabilities in NMFS' stewardship processes, including compliance with the National Environmental Policy Act and Regulatory Flexibility Act, that have been identified by internal and external advisory and oversight groups.

- **National Fisheries Information System: \$8.0 million**

The total request of \$8.0 million for the National Fisheries Information System will be used to implement a National Fisheries Information System to improve the quality, timeliness, coverage and access to data collected by State and Federal entities for use in the science and management of fisheries. This System has been developed in cooperation with the fishing industry, states, and interstate fisheries commissions as outlined under section 401 of the Magnuson-Stevens Act. The additional \$1.5 million for the Atlantic States Marine Fisheries Commission is continued in the FY 2002 request.

Information Analyses and Dissemination

\$25.9 million

The total request of \$25.9 million for Information Analyses and Dissemination represents an increase of \$1.3 million over the FY 2001 Enacted level. This request includes \$4.0 million for **information technology refreshment** within the Computer Hardware and Software line an increase of \$0.5 million over the FY 2001 Enacted level. These funds support the scientific and computational technology infrastructure necessary to analyze data through computer models used to forecast changes in resource abundance required for long-range management. NMFS' current computer infrastructure is outdated (over 8 years old) and must be updated to keep pace with the ever increasing flow of fisheries information.

Conservation and Management Operations

\$302.9 million

The total Request of \$302.9 million for this subactivity represents an increase of \$13.1 million over the FY 2001 Enacted level. Funding provides for the development and implementation of Fishery Management Plans (FMPs) under the Magnuson-Stevens Fishery Conservation and Management Act and the

Sustainable Fisheries Act, and for the management of protected species under the Endangered Species Act and Marine Mammal Protection Act. It also includes funding for the enforcement of laws and regulations under these and other statutes. This subactivity also funds NMFS efforts to protect fisheries habitats, the eight Regional Fishery Management Councils, and Mitchell Act hatcheries along the Columbia River in the Pacific Northwest.

Fisheries Management Programs

\$140.1 million

The total request of \$140.1 million for the Fisheries Management programs represents an increase of 4 FTE and a decrease of \$7.5 million from the FY 2001 Enacted level. This level of funding will continue to support many of the programs funded in the FY 2001 appropriation including: \$6.7 million for American Fisheries Act implementation, \$21.0 million for data collection for fishery management programs including implementation of National Environmental Policy Act requirements, and \$11.0 million for coral reef programs. Below are details outlining the FY 2002 request for the Fisheries Management Programs:

- **NMFS Facilities Operations and Maintenance: \$4.4 million**

The total request of \$4.4 million represents an increase of \$0.4 million over the FY 2001 Enacted level to cover operation and maintenance costs at two key facilities, the new Santa Cruz, California, Laboratory and Kodiak, Alaska, Laboratory.

- **Essential Fish Habitat: \$2.5 million**

NOAA requests a total of \$2.5 million for essential fish habitat (EFH) activities. This investment will enable NMFS to collect critical scientific data that are needed to identify EFH more precisely for managed species, enhancing the effectiveness of fishery management actions, and filling data gaps that can provoke litigation. Research will also focus on the effects of specific fishing activities on EFH, comparing those impacts to other sources of habitat degradation, monitoring habitat recovery in areas where fishing has been curtailed, and developing management strategies to ensure sustainable harvesting practices. NMFS will enhance its ability to provide timely and meaningful conservation recommendations for activities that have the potential to impact EFH.

- **Fisheries Observers: \$4.0 million**

NOAA requests a total of \$4.0 million to support the National Observer Program. This investment would provide increased observer coverage to minimum levels as required by regulation or to optimal levels as recommended by fisheries scientists for statistical validity, and initiate coverage in fisheries that were previously not observed.

- **Fisheries Habitat Restoration: \$12.0 million**

The total request of \$12.0 million represents a decrease of \$5.9 million from the FY 2001 Enacted level for the Fisheries Habitat Restoration program. Within this amount and increase of \$2.0 million is requested to expand community-based restoration projects. Within the FY 2002

request, both the Bronx River restoration project and the Pinellas County, Florida restoration project will continue at the \$1.0 million level.

- **Northeast Fisheries Management: \$3.5 million**

NOAA requests a total of \$3.5 million for Northeast Fisheries Management. This investment will enable NMFS to continue rebuilding overfished and overcapitalized Northeast fisheries including groundfish and scallops. Additionally, this funding provides programmatic support for NMFS' participation in regional cooperative research programs.

- **Cooperative Research in the Northeast: \$5.0 million**

NMFS requests \$5.0 million to continue cooperative research activities in the Northeast that was started in FY 2001 as a transfer from USDA. This program, as well as, the Southeast Cooperative Research program and National Cooperative Research programs funded in Resource Information involves fishermen in designing and conducting research programs utilizing the expertise and insights of people who have been close to the environment for the duration of their career - fishermen - in resource survey design and interpretation. NMFS is addressing regional issues and species specific needs in various programs around the country through these other cooperative programs. An additional \$5.0 million for the Northeast Consortium, included in the FY 2001 appropriation, is maintained in the FY 2002 request.

- **Regional Councils: \$15.7 million**

The total request of \$15.7 million represents an increase of \$2.5 million over the FY 2001 Enacted level for the eight Regional Fishery Management Councils. This request supports all eight Councils' increased workload from new programs and regulations as a result of implementing the Sustainable Fisheries Act amendments to the Magnuson-Stevens Act. NMFS is the Councils' only source of funding to carry out their vital mission.

Protected Species Management

\$105.0 million

The total request of \$105.0 million for the Protected Species Management program represents an increase of \$10.2 million over the FY 2001 Enacted level. This request proposes to continue protected species recovery and management efforts including Atlantic salmon, California sea lions, Atlantic right whales, native marine mammals, Pacific salmon, and the marine mammal stranding network.

- **Endangered Species Act Recovery Plan: \$62.8 million**

The total request of \$62.8 million represents an increase of 12 FTE and \$7.6 million over the FY 2001 Enacted level for the Endangered Species Act Recovery Plan. This level of funding continues current base programs and includes \$0.9 million for Steller sea lion Recovery and \$38.0 million for Pacific Salmon.

- **Sea Turtles: \$6.3 million**

The total request of \$6.3 million represents an increase of 6 FTE and \$3.0 million over the FY 2001 Enacted level for marine sea turtle activities to recover Atlantic and Pacific stocks threatened by domestic and international fisheries interactions as well as inadequate conservation of marine turtle nesting beaches.

- **Marine Mammals: \$4.5 million**

The total request of \$4.5 million represents an increase of \$1.0 million over the FY 2001 Enacted level for **dolphin** conservation and recovery to expand current activities in stock identification and assessment, to reduce mortality incidental to commercial fishing activities, and to initiate efforts to use bottlenose dolphins as an indicator of the health of the ecosystems they occupy.

- **Atlantic Salmon: \$6.3 million**

The total request of \$6.3 million represents an increase of 6 FTE and \$1.5 million over the FY 2001 Enacted level to conserve and restore healthy populations of Atlantic salmon in the Gulf of Maine Distinct Population Segment and their habitats. NOAA will use this increase to expand the monitoring of Atlantic salmon population dynamics, expand habitat assessment and conservation, enhance scientific knowledge related to human resource usage and development activities that are affecting species survival, and strengthen evaluations to minimize risk through coordinated planning, innovative partnering, and on-site involvement in restoration, conservation, and protection activities.

- **Right Whales: \$7.0 million**

The total request of \$7.0 million represents an increase of \$2.0 million over the FY 2001 Enacted level for Northern right whales to expand current population and health assessments and recovery efforts in the North Atlantic and in the North Pacific.

Enforcement and Surveillance

\$47.3 million

The total request of \$47.3 million represent an increase of 27 FTE and \$10.1 million over the FY 2001 Enacted level for Enforcement and Surveillance activities to modernize NMFS' fisheries and protected species enforcement programs. Of this amount, \$7.4 million is needed for additional support, continued modernization and expansion of the vessel management system (VMS) program. This national program is capable of accommodating nearly 10,000 vessels throughout a number of different fisheries. The remaining \$39.9 million is requested to expand and modernize base enforcement programs, an increase of \$3.9 million over FY 2001 Enacted level. These programs include, Alaska and west coast groundfish enforcement, protected species enforcement, state and local partnerships, specialized Magnuson-Stevens Act

investigatory functions, community oriented policing and problem solving, and swordfish/Patagonian toothfish import investigations.

State and Industry Assistance Programs

\$21.4 million

The total request of \$21.4 million for State and Industry Assistance is \$40.8 million below the FY 2001 Enacted level. This continued investment provides the same level as the FY 2001 Enacted for product quality and safety research, grants to states under the Anadromous and Interjurisdictional Fisheries Acts, the three interstate fisheries commissions, and implementation of the Atlantic Coastal Fisheries Act.

Acquisition of Data

All funding for this program has been transferred to the Office of Marine and Aviation Operations (OMAO) under the Marine Operations subactivity. The transfer of these activities to OMAO will allow for the management of the fleet operations as a NOAA-wide asset.

Procurement Acquisition and Construction Account (PAC)

Construction

\$14.7 million

The total request of \$14.7 million for this activity represents a decrease of \$39.5 million from the FY 2001 Enacted level.

- **Juneau Research Facility: \$11.7 million**

The total request of \$11.7 million for the Juneau Research Facility represents a decrease of \$3.2 million from the FY 2001 Enacted level. Funds will be used to continue the construction of a new state-of-the-art research facility at Lena Point. This facility will replace the current outdated laboratory and expand NMFS groundfish and ecosystem research capabilities significantly. This facility will also include a sea water storage and distribution system. The proposed facility will enable NMFS to more adequately manage the commercial, recreational and environmental resources in the North Pacific. The University of Alaska Fairbanks, School of Fisheries and Ocean Sciences continues to plan to co-locate their new facility at Lena Point.

- **Honolulu Facility: \$3.0 million**

NOAA requests a total of \$3.0 million to continue the replacement of the Honolulu Laboratory. Compliance with current building code and disability standards continues to be a serious concern. This funding will enable the project to proceed with work needed to correct several deficiencies, such as overcrowding, lack of laboratories, inadequate or nonexistent handicap access, and hazardous materials. Specific activities to be completed under this initial phase will include preparations for relocating personnel to temporary facilities during construction, construction of mitigation parking for neighboring University of Hawaii, and initial site preparations.

Fleet Replacement

In January of 2001, NOAA awarded a construction contract to Halter Marine, Inc. of Gulfport, Mississippi for the first FRV. The Fisheries Research Vessel (FRV) program contract includes options for up to three additional vessels. No funds are requested for a second vessel in FY 2002. The state-of-the-art ship, which will be NOAA's first acoustically quiet fisheries research vessel, will become operational in three years. This vessel will be capable of conducting a wide variety of scientific missions, including fisheries stock assessments, physical and biological oceanography, marine mammal research, atmospheric and sea surface research, and development of advanced technologies for fisheries research and assessment. This program remains a high priority for NOAA and NMFS.

Fishermen's Contingency Fund (FCF) \$0.9 million

The total request of \$0.9 million continues this Fund at the FY 2001 Enacted level. Title IV of the Outer Continental Shelf Lands Act Amendments of September 18, 1978, (P.L. 95-372, Section 402) as amended, established the Fisherman's Contingency Fund. This Fund provides compensation to domestic fishermen for the damage or loss of fishing gear, and resulting economic loss due to obstructions related to oil and gas exploration, development, or production in areas of the Outer Continental Shelf.

The Fund is supported by assessments on holders of leases, explorations, permits, easements, and rights of way in areas of the Outer Continental Shelf.

Foreign Fishing Observer Fund (FFOF) \$0.2 million

The total request of \$0.2 million continues this Fund at the FY 2001 Enacted level. The Foreign Fishing Observer Fund provides observer coverage of foreign fishing activities within the 200-mile Exclusive Economic Zone (EEZ). The Fund is supported by fees charged to foreign fishermen for the cost of placing an observer aboard their vessel while operating within the EEZ. Beginning in FY 1985, foreign fishermen were also permitted to contract directly with NMFS approved observer contractors to obtain observers (the Supplemental Observer Program). Appropriated funds plus direct contracting under the Supplemental Observer Program will provide 100% observer coverage.

Fisheries Finance, Program Account \$0.3 million

NOAA requests a total of \$0.3 million for the Fisheries Finance, Program Account. Under the authority of the Merchant Marine Act of 1936 and the provisions of the Federal Credit Reform Act of 1990, the Federal Ship Financing Fund became a liquidating account for loan guarantees made prior to FY 1992. Loan guarantees made on or after October 1, 1991, were made under the Fishing Vessel Obligation Guarantee (FVOG) appropriation. The re-authorization of the Magnuson-Stevens Fishery Conservation and Management Act in September 1996 changed the program to direct loans, from loan guarantees. The loans awarded under the base Fisheries Finance Program can be used to provide long-term fisheries loans for vessels and shoreside facilities (including aquaculture facilities) and for industry-funded capacity reduction programs.

Promote and Develop Fishery Products & Research Pertaining to American Fisheries (P&D)

The American Fisheries Promotion Act (AFPA) of 1980 authorized a grants program for fisheries research and development projects to be carried out with Saltonstall-Kennedy (S-K) funds. S-K funds are derived from duties on imported fisheries products. An amount equal to 30% of these duties is being transferred to the Department of Commerce from the Department of Agriculture. FY 2002 estimates this transfer at \$72.8 million. Of this amount, \$4.8 million will be used for the S-K grants program to develop a healthy fishing industry (including costs of program administration). The remainder of the transfer (\$68.0 million) will be used to offset the Operations, Research, and Facilities (ORF) account. The duties transferred to this account are calculated on a calendar year basis and, if necessary, will be revised after the submission of the President's request.

Pacific Coastal Salmon Recovery Program \$90.0 million

The total request of \$90.0 million continues the Pacific Coastal Salmon Recovery Fund at the FY 2001 Enacted level. The states and tribes will use these funds for habitat restoration and protection, research and enhancement, monitoring and evaluation, and salmon recovery planning and implementation. These funds will be used to enhance Pacific Coastal Salmon for the purpose of helping share the costs of state, tribal and local conservation initiatives. Programs funded within this account will bolster existing State and tribal capabilities to assist in the conservation of Pacific salmon runs, some of which are at risk of extinction in the states of California, Oregon, Washington, and Alaska. Funds provided to these states will have at least a 25 percent match. Funds provided to Pacific coastal and Columbia River tribes do not require matching dollars. This budget responds to current and proposed listings of coastal salmon and steelhead runs under the Endangered Species Act by forming lasting partnerships with states, local and tribal governments and the public for saving Pacific salmon and their important habitats.

Pacific Salmon Treaty \$20.0 million

The total request of \$20.0 million continues to implement the Pacific Salmon Agreement at the FY 2001 Enacted level. This level of funding will provide \$10.0 million to capitalize the Southern Boundary Restoration and Enhancement Fund and \$10.0 million to the Northern Boundary and Transboundary Rivers Restoration Fund. The treaties are also supported by funds from the State Department. By FY 2003, a total of \$65.0 million is needed to fully fund the Southern Fund and \$75.0 million is needed to fully fund the Northern Fund. The two endowment funds are administered by the Pacific Salmon Commission for habitat, stock enhancement, science and salmon management initiatives in both the United States and Canada.

Environmental Improvement and Restoration Fund \$5.2 million

NMFS requests a total of \$5.2 million out of a total NOAA request of \$10.4 million for the Environmental Improvement and Restoration Fund (EIRF). The other half of the EIRF is described under the National Ocean Service. The EIRF was created by the Department of Interior and the Related Agencies Act of 1998 for the purpose of carrying out marine research activities in the North Pacific. The EIRF provides funds for the purpose of carrying out marine research activities in the North Pacific. These funds will provide grants to Federal, State, private or foreign organizations or individuals to conduct research activities on or relating to the fisheries or marine ecosystems in the North Pacific Ocean, Bering Sea, and Arctic Ocean.



Oceanic and Atmospheric Research

Total Request: \$340,798,000

ORF: \$330,188,000

PAC: \$10,610,000

The Office of Oceanic and Atmospheric Research (OAR), frequently called “NOAA Research,” conducts the scientific research, environmental studies, and technology development needed to improve NOAA’s operations and broaden our understanding of Earth’s atmospheric and marine environmental systems. NOAA Research currently contributes directly to the attainment of six of the seven goals of NOAA’s strategic plan, which articulates NOAA’s mission to support the Nation’s economic growth in an environmentally sound manner.

The NOAA Research budget activity supports joint programs with other Federal agencies, including the U.S. Weather Research Program, U.S. Global Change Research Program, Health of the Atmosphere, and Ocean Exploration. NOAA Research is also active in High Performance Computing and Communications, the Climate and Global Change Program, and efforts to sustain our coral reefs.



A coordinated national network of Federal laboratories and university partnerships carries out the NOAA research mission. Located in NOAA Research Laboratories, Office of Global Programs, Undersea Research Centers, Sea Grant Colleges, and university-based Joint and Cooperative Institutes, NOAA Research personnel are internationally recognized for their contributions to such fields of science as oceanography, climatology, and meteorology. These dedicated scientists translate new discoveries and technological developments into improvements to

NOAA's operations in weather, climate, and solar-terrestrial forecasting; coastal resource conservation; fisheries enhancement; and other areas. NOAA Research provides the sound science upon which decision makers can frame effective regulations to solve such environmental problems as the rehabilitation of the ozone layer. NOAA Research promotes economic growth by developing new products and techniques in marine biotechnology and aquaculture and improving economic resilience by improving the lead-time, accuracy, and specificity of climate and weather predictions. Ultimately, NOAA Research is dedicated to promoting the environmental sustainability of our Nation's economic competitiveness and well-being.



The total request of \$340.8 million for the OAR Budget Activity represents a level of funding of \$9.6 million less than the FY 2001 Enacted level. This continued investment will provide the resources necessary to continue vital research in fields ranging from climate and air quality to the oceans and Great Lakes. This request consists of program increases of \$26.0 million, a reduction of \$28.9 million for program terminations, \$0.7 million to restore the FY 2001 rescission, and a decrease of \$7.4 million in adjustments-to-base which include transferring Acquisition of Data to Program Support, and a \$2.0 million transfer to the new Ocean Exploration line item.

Significant Adjustments-to-Base

A key component of this request is an increase of \$5.5 million in base adjustments to cover the increased costs of pay, benefits, and other objects. Failure to receive these adjustments in any given year results in program dislocations and minor cutbacks. Failure to receive these adjustments over time has a cumulative impact that is programmatically devastating. Over the past six years, NOAA Research has received only 3 percent of the cumulative adjustments required to keep pace with inflation (or \$1.1 million of \$33 million required). Many laboratories can no longer cover their payroll out of base funding and have been forced to seek ever increasing amounts of reimbursable funding. Although this work supports NOAA missions, its shorter time frame does not fund the long-term focus needed to improve NOAA service delivery and provide the scientific input required to support our Nation's major environmental policy decisions.

Detailed Program Changes by Sub-Activity

Operations, Research and Facilities (ORF)

Climate and Air Quality Research: \$158.5 million

The total request of \$158.5 million for this subactivity represents an increase of \$14.4 million over the FY 2001 Enacted level. This continued investment in Climate and Air Quality Research focuses on learning the physical processes of the ocean and atmosphere to increase

modeling accuracy, thus furthering NOAA's predictive capabilities. Within this total, the following increases are included:

Climate Observations & Services: \$24.0 million (and \$3.6 million in PAC)

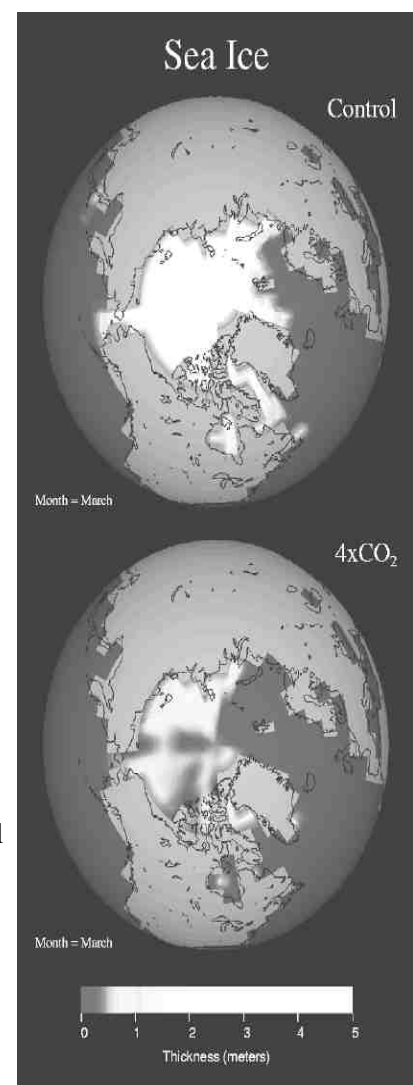
NOAA requests an increase of \$13.0 million for a total of \$24.0 million to advance the Climate Services Program (an additional \$1.6 million increase for a total \$3.6 million is requested in PAC for the Comprehensive Large Array data Stewardship System Initiative). The NOAA Climate Services program was initiated in FY2001 with the request of a new line under the OAR Climate and Air Quality subactivity and \$12.2 million was enacted. NOAA plans to develop complete climate services with initial emphasis on building an ocean observing system to address scientific and operational aspects of climate. The funds will be jointly managed by OAR, NESDIS, and NWS, with the specific increases as described below.

Regional Assessments, Education and Outreach: \$1.9 million

NOAA requests a total of \$1.9 million for investments in regional assessments, education and outreach. The impacts of climate variability from season-to-season or year-to-year manifest themselves on regional and local levels. The goal is utilization of climate variability information by regional and local managers and decision-makers to maximize economic gain and mitigate potential harmful impacts. This initiative addresses all aspects of the process by: (1) strengthening existing successful university-based, regional integrated assessments and creating new ones, (2) initiating an ambitious education and training program for NWS and private sector field meteorologists, hydrologists, and climatologists, (3) developing the tools, materials, and mechanisms for an effective NWS customer/decision-maker outreach program, (4) effecting the transition of the Pacific ENSO Applications Center from demonstration project to long-term operational status.

Climate Change Assessments: \$0.7 million

NOAA requests a total of \$0.7 million for climate change assessments. This investment will expand and improve the accessibility and availability of weather, water, and climate information to the American people and high-risk communities. The environmental assessments have become the primary tool to deliver information and knowledge on decadal-to-centennial climate change to governments, industry, the scientific community and the general public. Over the past two years we have led and contributed to Ozone, IPCC and US National Assessments. Other assessments being proposed are: Arctic Change, and Science of North American Fine Particles (Canada, US, Mexico). NOAA will: contribute a leadership role in the North American Research Strategy for Tropospheric Ozone (NARSTO) Assessment of Surface-level Ozone and fine particles for Canada, U.S., and Mexico; complete the first draft of the circum-Arctic assessment of what is known about climate variability in the Arctic and how this variability affects



ecosystems and human activities; interpret for key U.S. regions the major findings on fine-particle and ozone levels and how choices associated with one influence the others; provide governments, industry, and the general public a summary of the major findings of the IPCC assessments on climate change; and contribute to a follow-on to the current U.S. National Assessment.

Weather-Climate Connection: \$0.9 million

NOAA requests \$0.9 million for the weather-climate connection. This investment will enable NOAA to expand its diagnostic and modeling efforts to understand the relationship between sub-seasonal tropical variability and changes in the frequency, location, and intensity of extreme weather events over the United States. Observational and modeling efforts will aim to document the pattern of variations in tropical rainfall on weekly-to-monthly time scales as well as air-sea interactions both in tropical systems and in mid-latitude oceanic and land-falling storms. During El Niño, shifts in the Pacific storm track affect the paths of storms approaching the U.S. west coast and influence weather across the entire country. Other tropical fluctuations at sub-seasonal scales can also lead to similar effects on U.S. weather. At present, operational forecast models do not simulate these week-to-week tropical fluctuations well, if at all.

Carbon Cycle: \$2.3 million

NOAA requests \$2.3 million for this activity. This investment will enable NOAA to establish a network of more densely spaced airborne and tall-tower-based sampling sites over North America as part of a multi-agency effort to quantify, understand, and project the evolution of global carbon sources and sinks in order to better predict future climate. This sampling program will complement local-scale process research managed by other agencies and provide an estimate of the magnitude of regional terrestrial sinks on a continental scale. Finally, data obtained through process studies and observational networks must be analyzed. These studies include analyzing the causes of variability of carbon sinks from year to year and decade to decade, understanding the feedbacks between the carbon cycle and the physical climate system and quantifying and incorporating the effects of human land-use change into climate models.

Ocean System for Improved Climate Services: \$7.3 million

NOAA requests \$7.3 million for ocean system for improved climate services. This investment will enable NOAA to implement and maintain a global operational ocean observing system by enhancing its present components and establishing new ones. The system is based on a firm scientific foundation and closely coupled to other U.S. and international observing efforts. The National Ocean Research Leadership Council has recently created an office under the National Oceanographic Partnership Program (NOPP) whose function will be to integrate existing and new ocean observational efforts of the NOPP agencies and their international, state, local, and private-sector partners. The integration effort will facilitate broad user access to ocean knowledge, data, tools, and product specific components, such as networks and other aspects of the observing system. Additional components are briefly described below:

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- **Argo Floats** (\$3.2 million): Funding supports the U.S. commitment to provide and maintain one-third of the global array of 3,000 profiling floats to observe the ocean's upper layer in real time. These floats, together with satellites, will be the oceanic equivalent of today's operational observing system for the global atmosphere. This is a truly international effort with 7 nations plus the European Union currently providing floats and 4 additional nations planning to provide floats in the very near future. The additional funds will permit NOAA to reach an annual deployment level of about 280 floats, which should be sufficient (given an annual expected loss rate of about 10 percent) to reach an array of 1,000 floats during FY 2005. After this point, new floats deployed would be replacements (since the design lifetime of an Argo float is 4-5 years).
 - **Ocean Reference Stations** (\$0.9 million): NOAA will implement a global network of ocean reference station moorings, expanding from the present two pilot stations to a permanent network of 16 by 2010. These have been a cornerstone of decadal-to-centennial documentation of changes in ocean properties and will also improve seasonal-to-interannual forecasting ability by providing calibration/validation data for remote sensing of surface-flux fields.
 - **Volunteer Observing Ships (VOS)** (\$0.5 million): The global atmospheric and oceanic data from ships of opportunity have been the foundation for understanding long-term changes in marine climate and are essential input to climate and weather forecast models. In order to satisfy climate-prediction needs, NOAA will increase the quality of these data by adding new sensors for surface-flux observations as well as bio-geochemical sensors.
 - **Ocean Carbon** (\$0.9 million): Projecting decadal-to-centennial global climate change is closely linked to assumptions about feedback effects between the ocean and atmosphere related to additional input of carbon dioxide into the atmosphere. NOAA will add autonomous carbon-dioxide sampling instruments to the moored arrays and the VOS fleet and will begin to implement an ongoing ocean-carbon inventory that will survey the globe once every ten years.
 - **Arctic Ocean Fluxes** (\$0.5 million): Over the past 20 or more years, significant changes have been noted in the Arctic, such as thawing of permafrost, earlier break-up of ice on rivers, and thinning of the ice cover on the Arctic Ocean. Recent studies conclude that changes seen in the extent of Arctic ice are unlikely to have been caused by natural variability, and substantial decreases in sea-ice thickness and extent are predicted to occur in the 21st century. NOAA proposes to join with other Federal agencies and international collaborators to begin a long-term effort to quantify the flux of fresh water from the Arctic to the North Atlantic. The initial steps will be made through deployment of moorings at critical locations in the Arctic.
 - **Data Management & Data Assimilation** (\$1.3 million): A robust and scalable data management infrastructure is essential to the vision of a sustained ocean-observing system. The data must be retained and made available for retrospective analyses to understand climate change and for managing observing system operations and improvements. To utilize effectively the new observations, NOAA will expand the current ocean analyses to the global domain and develop and implement improved assimilation systems that can more effectively use the new data types that are being collected. Our participation in the Global Ocean Data Assimilation Experiment (GODAE) is one vehicle for doing this, involving both national and international communities, producing a variety of marine products, and using these observations in forecast systems.



Atmospheric Programs: \$51.8 million

The total request of \$51.8 million for this sub-activity represents an increase of \$3.7 million over the FY 2001 Enacted level. This continued investment in Atmospheric Programs supports improvements in weather, solar-terrestrial, and air-quality monitoring and prediction. Within this total, the following program increases are included:

U.S. Weather Research Program: \$3.7 million

NOAA requests a total of \$3.7 million for USWRP, an increase of \$2.2 million over the FY 2001 Enacted level. This investment continues the cooperative effort among OAR, NWS, and NESDIS within NOAA, three other USWRP agencies (NSF, NASA, and the Navy), and the university community. The USWRP will conduct research and development on experimental numerical model algorithms, provide field observational support, and strive for information and technology transfer to operations and services in order to reach performance goals defined for the following high priority areas:

- *Hurricanes at Landfall* - USWRP will focus on extending hurricane track predictions up to five days, improving the accuracy of the hurricane landfall location and improving the forecasts of hurricane intensity at landfall, surface wind forecasts, and providing more precise quantitative precipitation forecasts in conditions under which precipitation may lead to inland flooding. Field observations are planned during hurricane seasons in the western Atlantic, Caribbean, and Gulf of Mexico. The NOAA P3 and Gulfstream IV as well as NASA aircraft, each with state-of-the-art instrumentation, will be deployed in coordinated campaigns. Observations from NOAA, NASA, and Defense Meteorological Satellite Program (DMSP) satellites will be combined with other data sources to provide information for: hurricane process studies, assimilation into operational and experimental numerical models, and real-time use at national and local forecast offices.
- *Optimal Mix of Observations/Quantitative Precipitation Forecasts (QPF)* - This effort, also coordinated between the four agencies, will improve our understanding of the use of data from advanced observing systems which will improve numerical weather prediction. Although its initial focus will be mostly on hurricane landfall research, the USWRP will, over time, focus increasingly on accelerated research to improve quantitative precipitation forecasts. The goals of this effort are to improve the forecasts of winter coastal storms and severe winter weather (e.g., blizzards, ice storms, and winter flooding in the southern portions of the U.S.) and to extend these weather forecasts out to day 7 with acceptable skill. Research will also be directed toward better representation of convection in forecast models through the storm-scale experiments, understanding orographic effects, and development of coupled atmospheric and hydrologic models to better represent runoff and flooding potential.

Critical to USWRP success in meeting its goals is its ability to transfer research results to operations. This will be done in the form of weather prediction test beds, including Joint Hurricane Test Bed; the regional weather prediction test bed in Boulder, Co, for QPF; and the NOAA-NASA Joint Center for Satellite Data Assimilation.

Oceans and Great Lakes Programs: \$119.8 million

The total request of \$119.8 million for this subactivity represents a decrease of \$2.5 million from the FY 2001 Enacted level. This continued investment enhances our knowledge of ocean and Great Lakes environments so that they can be managed in a sustainable manner, promoting economic growth in marine industries while conserving the underlying environments and resources upon which these industries depend. Because of its record in generating critically needed research, educational, and advisory services in a successful partnership between the Administration, Congress, and academia, the National Sea Grant College Program is supported at the FY 2001 Enacted level plus a small adjustment to base for a total funding level of \$62.4 million. The National Undersea Research Program (NURP) also is supported at slightly above the FY 2001 Enacted level for a total funding level of \$13.8 million. This will help ensure that NURP will be able to play a role in the new Ocean-Exploration Initiative. Future plans include strengthening the partnership with the Congress in shaping NURP and continuing important undersea research in fisheries habitats, coral-reef ecosystems, and fisheries management issues. Finally, the program expects in future years to encourage new research related to understanding deep-ocean environments. Within the total sub-activity level are requests for the following program increases:

Marine Environmental Research: \$22.6 million

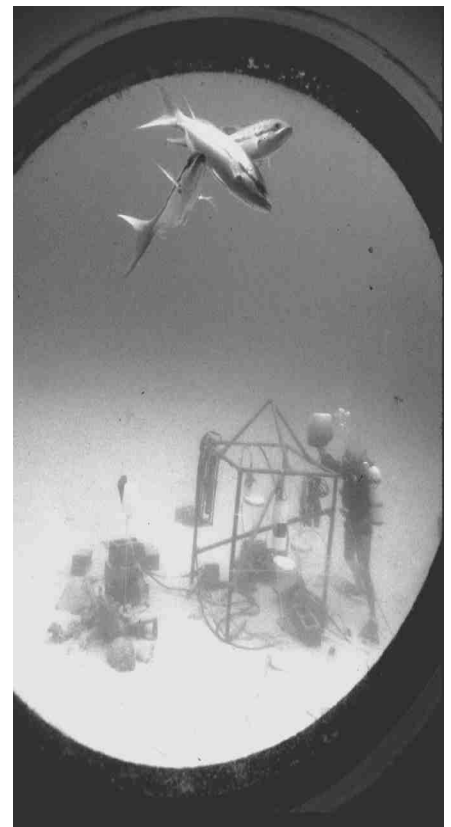
NOAA requests a total \$22.6 million for marine environmental research. Details of the program changes are as follows:

Marine Environmental Research and Coral Reef Watch: \$11.6 million.

NOAA requests an increase of \$0.5 million for ongoing Marine Environmental Research. This investment will allow:

- NOAA's Atlantic Oceanographic and Meteorological Laboratory's (AOML) Remote Sensing Division to reactivate its field measurements that provide data critically needed for major community health-related decisions in contaminant-release emergencies in Florida and elsewhere as well as resource management decisions related to releases of dredged material.
- PMEL's Fisheries Oceanography program would be able to restore its ocean measurements program in the Gulf of Alaska and Bering Sea. In these areas, recent climate changes have led to shifts in the species composition of these ecosystems. Using an integrated system of moored buoys and other oceanographic platforms, measurements will be collected to help develop models to better assess climate variability in the north Pacific.

NOAA requests an increase of \$0.5 million for Coral Reef Watch. This investment will improve the understanding of coral reef ecosystems through monitoring and predicting changes in coral reef ecosystems. The AOML laboratory in Miami, FL, will manage this research effort in



coordination with NURP field observations at Caribbean Marine Research Center (Lee Stocking Island (LSI), Bahamas) to better understand ecosystem response. This investment will allow AOML to:

- Predict coral bleaching episodes through Coral Reef Early Warning System (CREWS) software in support of the *in-situ* field monitoring station and to further develop the collaborative NESDIS/OAR Coral Reef Watch early-warning system.
- Establish an additional *in-situ* monitoring station in the U.S. Virgin Islands and provide continuing support for CREWS stations already established (e.g., LSI, NW Hawaiian Islands), providing near-real-time data to predict coral bleaching and other coral phenomena. The U.S. Virgin Islands site is one of twenty recommended by the U.S. Coral Reef Task Force/Monitoring Working Group.
- Provide long-term, near-real-time data and data interpretation, upon which sound coastal and coral-reef management decisions can be made. The data will also be used to ground-truth NESDIS' satellite monitoring of coastal health and corals.
- In addition, AOML will continue to maintain the Coral Health and Monitoring Program Web page and its international coral-list server and will collaborate with National Oceanographic Data Center and other NOAA Line Offices in support of NOAA's Coral Reef Data and Information Management System.

NOAA Marine Aquaculture Program: \$3.6 million

NOAA requests \$3.6 million for marine aquaculture. This continued investment is designed to meet the new DOC Aquaculture Policy Goals and conform to the National Aquaculture Development Plan soon to be released by the Joint Subcommittee on Aquaculture. NOAA will proceed with its Competitive Grants Program that funds projects to: expand the appropriate regional and issue efforts in selecting new species for aquaculture; test new production systems under actual field conditions; improve and clarify the regulatory framework and coastal zoning for aquaculture; support hatchery development technology; conduct environmental research relative to aquaculture; provide the regulatory, environmental, developmental, and scientific base for U.S. aquaculture; and support the more basic research in genetics, disease diagnosis and control, nutrition, hormonal manipulation, and biotechnology. The projects funded are expected to help lead this industry toward becoming an environmentally sustainable industry.

Ocean Exploration

**\$14.0
million**

The total request of \$14.0 million represents an increase of \$10.0 million over the FY 2001 Enacted level. This continued investment will allow OAR, NOS, NMFS, NESDIS, and external partners (e.g. EPA, NASA, NSF, MMS, DOE, Navy, USGS, and universities) to join together in a cross-agency, multi-institution partnership with a common goal of discovery and exploration of the last major frontier on Earth. This activity is NOAA's investment in undersea exploration, research, and technology in both the deep ocean and areas of special concern, such as the National Marine Sanctuaries (NMS). This

proposal supports NOAA's Sustain Healthy Coasts, Recover Protected Species, and Build Sustainable Fisheries goals and is fully consistent with the recommendations of the President's Panel on Ocean Exploration.

NOAA proposes to embark on a national endeavor; build on our initial efforts in ocean research; partner with existing public, private, and academic ocean exploration programs and promote undersea exploration and research. This proposal calls for an aggressive plan of action to build our National understanding of ocean systems and processes and to develop partnerships for sharing information through education, outreach, and communications. This exploration effort will focus in five areas:

- **New Ocean Resources** (\$1.4 million). The oceans hold vast untapped economic potential beyond fishing. Ocean floor energy-resource deposits, such as methane hydrates may revolutionize patterns of current fossil fuel consumption. Microbial organisms that thrive in deep-sea vents have already been found to have significant biotechnological potential. Medical science is struggling to find new chemical compounds for pharmaceutical applications derived from land-based plants and animals, while the wealth of marine-based counterparts has scarcely begun to be explored and discovered. While it is reasonable to expect significant economic payback from exploration of new ocean resources, it is initially risky and unlikely that the private sector would fund early-phase exploration. NOAA proposes to undertake the early-phase exploration that may lead to the discovery of new resources in which the private sector will be interested. As a follow-up to initial exploration, we do expect both federal agencies and private-sector stakeholders to support research on the development and sustainable use of these resources. Government funding will also ensure that we take steps from the beginning to protect new resources from over exploitation.
- **Exploring Ocean Acoustics** (\$1.4 million). This program will begin to: (1) create a network for monitoring marine sound of natural and human origin in the Pacific and North Atlantic Oceans and (2) determine the effects of this noise on marine mammals and turtles. Some sound producing underwater objects can be detected thousands of miles away. Until recently, this sound has been monitored only by the military. There are, however, important civilian uses for these technologies, such as locating earthquakes, tracking whale migrations, and assessing the impact of noise on marine animals. Finally, NOAA needs to understand the normal hearing of many marine species and determine if behavioral disruption is caused by noise to provide an information base for management of these species.
- **America's Maritime Heritage** (\$1.3 million). The U.S. maritime historical record is largely underwater and awaiting discovery and documentation. This initiative will create a meaningful national effort to survey, locate, map, inventory, and explore historic shipwrecks and archeological sites, principally within U.S. jurisdiction and sanctuaries. Experts estimate that 50,000 shipwrecks are in U.S. waters. This effort will push the development and application of deep ocean technology. By understanding the location, condition and value of such underwater treasures, sound public policy decisions can be made about commercial, academic, and stewardship opportunities.
- **Exploring Ocean Frontiers** (\$5.0 million). The sea floor, from the upper edge of the continental shelf to the bottom of the ocean's deepest trenches, covers approximately two-thirds of Earth's surface, most of which is still unexplored and un-surveyed. The overlying oceans cover more than 140 million square miles and constitute the largest habitat by volume on our planet. Yet, it is estimated we know fewer than 25% of the species that live in the oceans. This initiative will focus

initially on expeditions planned for such areas as the Gulf of Mexico, South Atlantic Bight, NW Hawaiian Islands, North East Pacific, California, and Gulf of Alaska. Future expeditions will include the Gulf of Maine, the Arctic, the Blake Plateau, the Caribbean, and the Central West Pacific. These have been chosen because of their unique features, processes, and information gaps. This work will focus on: water masses and ocean fronts, benthic life, submarine trenches and canyons, submarine volcanoes, polar seas, sea-mounts, hydrocarbon seeps and hydrate beds, and living and working in the sea. NOAA and its partners will explore and characterize areas where the habitats are not well known or understood (e.g., deep canyons, deep-reef ecosystems).

- **Census of Marine Life** (\$0.9 million): The Census of Marine Life is an emerging international research program conceived by the broad marine science community and initially supported by the Sloan Foundation. The Census will support studies over the next 5-10 years to examine the diversity, distribution, and abundance of marine organisms. NOAA's proposed Census activities will: (1) fund inclusion of the U.S. fisheries data in the Census of Marine Life's International Ocean Biogeographical Information System (OBIS - envisioned as a data system of global marine animal and plant distributions, which is critical to understanding the global and regional patterns in marine diversity); (2) initiate the development of new technologies to more efficiently assess marine fisheries and their habitats (emphasis on emerging optical and acoustical technologies); and (3) improve the classification of marine fishes.

Acquisition of Data

All funding for this program has been transferred to the Office of Marine and Aviation Operations (OMAO) under the Marine Operations subactivity. The transfer of these activities to OMAO will allow for the management of the fleet operations as a NOAA-wide asset. The NOAA fleet and charter vessels provide NOS with collection of hydrographic and coastal assessment data through days-at-sea for programs of significant National interest.

Procurement, Acquisition, and Construction (PAC)

The total request of \$10.6 million represents a decrease of \$12.5 million from the FY 2001 Enacted level.

High-Performance Computing & Communications \$7.0 million at the Geophysical Fluid Dynamics Laboratory (GFDL)

NOAA requests \$7.0 million for GFDL, which represents an increase of \$3.0 million from the FY 2001 Enacted level. This continued investment supports the full-year lease and provides software support for the supercomputer located at the GFDL in Princeton, NJ. The computer will be used full-time to address some of the most difficult but critical obstacles to developing and testing new and more realistic models for predicting climate variability, detecting climate change, and forecasting hurricanes.

**Comprehensive Large-Array data Stewardship
System (CLASS)****\$3.6 million**

The total request of \$3.6 million represents an increase of \$1.6 million over the FY 2001 Enacted level. As part of NOAA's Climate Services initiative begun in FY 2001, this continued investment will provide a data system to manage the high volumes (petabytes) of data critical to USGCRP and the scientific community. NOAA is enhancing its current archiving capabilities into a Comprehensive Large Array-Data Stewardship System that is fully operational and managed at the enterprise level. This system will afford efficient management of high volumes of data that are critical to the U.S. Global Change Research Program (USGCRP) and the scientific community. The target data originates from the National Polar-orbiting Environmental Satellite System, the Defense Meteorological Satellite Program, the Department of Commerce Next Generation Weather Radar, and Polar-orbiting Operational Environmental Satellite. Management of these data can be accomplished only through a rapid expansion in storage capacity at the Data Centers and automating the means of data ingest, quality control, and access through a phased systems buy. The early implementation of this archive and access system will pave the way to accommodate additional massive data volumes from the EOS satellites.

Detailed information regarding adjustments to base, program reductions and terminations are shown in Section 4:Supplementary Information.



National Weather Service

Total Request: \$727,607,000

ORF: \$658,456,000

PAC: \$ 69,151,000

The National Weather Service (NWS) provides weather, water, and climate forecasts and warnings for the United States, its territories, adjacent waters, and ocean areas for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community.

America's vulnerability to weather related hazards is rising as more of the population moves into weather threatened regions, and national and global economies become more complex. Approximately 40 percent of all Americans, some 100 million people, currently reside in areas of high risk to natural disasters, with the number climbing yearly. Today, 90 percent of all presidentially declared disasters are weather and flood related. Moreover, water resources are the lifeblood of the economy and our standard of living. During the next century, weather will continue to impact our lives and significantly impact the U.S. economy. In fact, the NWS was recognized last year as one of thirty-two high impact federal agencies. By working with our partners, especially the private sector and emergency management community, NWS is striving to ensure our products and services are responsive to the needs of the American public.

The FY 2002 President's Budget Request supports the funding and program requirements to enable the NWS to better use science to serve our citizens and fulfill its vision of becoming America's "no surprise" weather service. This vision states that the NWS will produce and deliver forecasts you can trust when you need them most, use cutting-edge technologies, provide services in a cost-effective manner, strive to eliminate weather related fatalities, and improve the economic value of weather information. In FY 2002, the NWS will continue its mission of providing weather and flood warnings and forecasts to the public and improve the overall warning lead times for tornadoes, severe thunderstorms, flash floods, as well as improve the accuracy of hurricane landfall predictions.

The NWS contributes to three of NOAA's Strategic Plan goals: Advance Short-Term Warning and Forecast Services, Implement Seasonal to Interannual Climate Forecasts, and Predict and Assess Decadal to Centennial Change. The NWS request also supports investments in the Natural Disaster Reduction Initiative (NDRI) as well as the NOAA Climate Services Initiative.

Overall, NOAA requests a total of \$727.6 million for the National Weather Service, a net increase of \$34.8 million above the FY 2001 Enacted level. This continued investment includes a total of \$658.5 million for Operations, Research, and Facilities (ORF) and \$69.1 million for Procurement, Acquisition, and Construction (PAC). In FY 2002, the budget priorities for NWS include sustaining current services, replacing obsolete technology, enhancing services to the public and its private partners, and infusing new technology.

Significant Adjustments-to-Base

NWS requests a net increase of \$16.7 million to maintain current services and abate declining base resources from mandatory pay and inflation. Detailed estimates are as follows:

Mandatory Pay, Inflationary Costs, and Adjustment: \$24.3 million

NOAA requests an increase of \$24.3 million to fund Adjustments-to-Base (ATBs) for NWS base operations and system accounts. The increase will fund the FY 2002 federal pay raise of 3.6 percent and annualize the FY 2001 pay raise of 3.8 percent. The increase will also provide mandatory inflationary increases for non-labor activities, including service contracts, field office lease payments, and rent charges from the General Services Administration (GSA). The base was also adjusted to transfer the Office of the Federal Coordinator for Meteorology to Program Support.

Restoration of FY 2001 Rescission: \$1.2 million

NOAA requests an increase of \$1.2 million to restore the FY 2001 rescission. Restoration of these funds in FY 2002 is required to sustain NWS warning and forecast services to the Public. In FY 2002, NWS will restore funding to provide critical training for weather office staff, repair and maintenance of the NOAA Weather Radio network, and replacement of remote river and flood gage communication devices.

Terminations: -\$8.8 million

The NWS requests a decrease of \$3.3 million to reflect the completion of the following one-time activities or programs: the Cooperative Institute for Regional Prediction in support of the 2002 Winter Olympics in Salt Lake City, UT (\$0.6 million); acquisition and installation of NOAA Weather Radio Transmitters at specified locations during FY 2001 (\$1.9 million); Mt. Washington Observatory (\$0.5 million); and the North Dakota Agricultural Weather Network (\$0.3 million).

In the PAC account, a requested decrease of \$5.5 million for the completion of the Evansville, Doppler Radar project. This decrease reflects the completion of one-time costs associated with the planned acquisition, deployment, and installation of a Doppler weather radar for the Evansville, IN during FY 2001.

Detailed Program Changes by Sub-Activity

Operations, Research, and Facilities

The total request of \$658.5 million for operations and research represents an increase of \$29.1 million over the FY 2001 Enacted level. This continued investment will allow NWS to maintain current services, begin modernization of the Cooperative Observer Network, and sustain operations at the National Centers for Environmental Prediction (NCEP). Specifically, the net increase of \$29.0 million includes \$24.3 million for Mandatory Pay Raises and Inflationary Costs, \$1.2 million to restore the FY 2001 rescission, \$1.9 million to sustain the Co-Operative Observer Network, \$1.7 million to sustain operational forecast models at NCEP's Environmental Modeling Center, \$3.0 million to increase the NWS investment in data assimilation development efforts at NCEP including the NOAA/NASA Joint Center for Satellite Data Assimilation, and \$0.3 million for Weather Forecast Office (WFO) Maintenance. In addition, the NWS request includes a reduction of \$3.3 million to reflect completion of one-time activities or programs. The specific details on each of these requests are outlined below:

Sustain Cooperative Observer Network: \$2.3 million

NOAA requests a total of \$2.3 million to sustain the Nation's cooperative observer network, an increase of \$1.9 million over the FY 2001 Enacted level. This continued investment will maintain a nationwide network of over 11,000 volunteer operated weather observing sites used by NOAA to prepare climate forecasts and flood outlooks, monitor droughts, and issue local weather forecasts. In a recent report, the National Research Council recommended that NOAA take immediate steps to sustain and modernize this critical network. The instruments used to detect daily minimum and maximum temperatures as well as rain gage recording devices for measuring precipitation are obsolete and costly to maintain. In many instances, spare parts are no longer commercially available for these measuring devices. In FY 2002, NWS plans to replace 900 rain gauges and 200 temperature sensors. This rescue effort will proceed over three years with the replacement of 2700 rain gauges and 5000 temperature sensors.



Weather Forecast Office (WFO) Maintenance & Repair: \$4.6 million

NWS requests a total of \$4.6 million for WFO Maintenance, an increase of \$0.3 million over the FY 2001 Enacted level. This continued investment will allow NWS to fund recurring maintenance contracts and address a backlog of over \$7.0 million in deferred maintenance repair actions. WFOs provide forecasters with modernized facilities, supporting the advanced technology systems and the provision of weather service to the public. As the WFOs continue to age, the facilities require a significant investment in recurring and cyclic maintenance, including replacement of major facility support systems such as power backup and heating, ventilation, and air conditioning (HVAC). The request will allow NWS to protect the \$250 million capital investment in modernized facilities in accordance with GSA and private industry standards.

NCEP Environmental Modeling Center - Sustain Current Operations: \$1.7 million

NOAA requests \$1.7 million to sustain operations at NCEP's Environmental Modeling Center (EMC). The EMC develops the computer models and other numerical forecast products which provide the basic guidance that forecasters use in making weather and climate forecasts. Today, the EMC is overly dependent on external sources of funding for its operations, degrading its ability to transfer proven weather forecasting science into NWS operations. The National Research Council in its report *From Research to Operations in Weather Satellites and Numerical Weather Prediction: Crossing the Valley of Death*, states "Almost all of the Nation's operational weather and climate guidance products come from EMC, which does not presently possess the necessary resources to transfer many of the U.S. advances in observations and modeling to operations." This investment will enable implementation of NWS plans to provide direct base support for its suite of operational forecast models, including the aviation, regional, hurricane, and global models.

NCEP Data Assimilation and Modeling: \$3.0 million

NOAA requests a total of \$3.0 million to improve data assimilation and modeling at NCEP. Data assimilation is the collection and processing of weather observations (satellite, aircraft, radar, data buoys, upper-air balloons) for use in operational numerical weather prediction models. These models are the foundation for all general weather forecasts (2 days and beyond) including aviation, marine, hurricane, rainfall, and severe weather. The objective of this critical funding request is to improve forecasts through the use of enhanced satellite data and other data-sets in the NCEP prediction models, leveraging the Nation's large capital investment in global observing systems. These activities will be implemented through the NOAA/NASA Joint Center for Satellite Data Assimilation which is funded in part through this initiative. Today, only 1/7th of the Nation's satellite data are utilized in operational weather forecasts models and too few resources are available for assimilating new satellite data. The National Research Council in its report *From Research to Operations in Weather Satellites and Numerical Weather Prediction: Crossing the Valley of Death*, states "In most cases, when new sensors are developed, insufficient budgetary resources are provided to develop algorithms necessary to introduce those sensors into the operational system. There is limited capability to address the special needs associated with assimilation of large volume of new satellite observations." The report also stated the slow pace of improving weather prediction models could place U.S. industry at a competitive disadvantage and potentially impact National Security. In FY 2002, NWS plans to provide critical funding support to the NOAA/NASA Joint Center, enhance efforts to develop a community weather prediction model, and improve and accelerate assimilation of new satellite data-sets into NCEP operational prediction models.

Advanced Hydrologic Prediction Service (AHPS): \$1.0 million

NOAA will also continue implementation of AHPS in the Upper Mississippi and Ohio River Basin, focusing on high priority flood prone areas. The ORF request includes a total of \$1.0 million for this critical service improvement program. AHPS is already improving both the lead time and accuracy of flood forecasts as well as water resource management by extending river flood stage forecasts from days to months in the future. The AHPS is also providing new probability forecasts for rivers, providing critical information which can be used by water resource and emergency managers for risk based decision making. The Service has been successfully tested on major river basins in North Dakota, Iowa, Georgia, West

Virginia, and Pennsylvania. Once deployed, AHPS will save lives and provide over \$600 million in annual savings to the U.S. economy.

Systems Operation & Maintenance (O&M): \$84.1 million

The total requests of \$84.1 million in Systems Operation and Maintenance (O&M) represents an increase of \$2.7 million from the FY 2001 Enacted level. This continued investment will provide the necessary resources to maintain these capital investments. The Systems O&M total also includes \$40.0 million for NEXRAD O&M, \$7.6 million for ASOS O&M, and \$36.5 million for AWIPS O&M.

Procurement, Acquisition and Construction (PAC)

The total request of \$69.1 million represents an increase of \$5.7 million over the FY 2001 Enacted level. The specific requests are listed below:

Systems Acquisition: \$57.2 million

Automated Surface Observing System (ASOS): \$5.1 million

NOAA requests a total of \$5.1 million for the ASOS PAC account, an increase of \$1.3 million over the FY 2001 Enacted level. This continued investment will ensure planned completion of the new ASOS dewpoint sensor acquisition (the highest failure rate sensor in the ASOS suite), and ASOS processor unit acquisition (current processor over capacity), and begin acquisition of the all-weather precipitation gauge necessary for climate record continuity and aviation safety. Specifically, in FY 2002, the NWS will complete acquisition of 346 dewpoint sensors, and 346 processors; deploy 314 processors; and acquire 115 all-weather precipitation gauges.



Advanced Weather Interactive Processing System (AWIPS): \$16.3 million

NOAA requests a total of \$16.3 million for the AWIPS PAC Account. This continued investment will enable NWS to complete a three year effort to develop and deploy AWIPS build 5 software. NWS is deploying AWIPS build 5 in three major builds (5.0, 5.1, 5.2) over a 3 year period, beginning in October of FY 2000 and ending in October of FY 2003. In FY 2002, NWS will complete the distribution of build 5.1 and 5.2 after a rigorous test and evaluation process. AWIPS Build 5 technology will provide NWS field forecasters with critical warning decision support systems to monitor and prioritize severe weather systems, automated product generation to improve efficiency, and improved radar and satellite display imagery. Combined with NEXRAD Product Improvement, AWIPS build 5 will allow NWS forecasters to significantly improve tornado warning lead times and improve the accuracy of severe thunderstorms forecasts.

Central Computer Facility - NWS Weather and Climate Supercomputing: \$15.1 million

NOAA requests a total of \$15.1 million to continue the operation and maintenance of the NWS (Class VIII) Weather and Climate Supercomputer located in the Census Facility in Bowie, Maryland. The NWS supercomputer is the foundation for all NWS weather and climate forecasts. In FY 2002, NWS plans to improve weather forecasts by improving the resolution of the regional weather model (Eta) from 22 to 12 kilometers and the global weather model from 75 kilometers to 55 kilometers. The NWS also plans to improve and expand operational climate forecasts and implement a new regional climate model. NWS will continue to issue the Drought Monitor, Climate Threats Assessment, and the Extreme Heat Index. NWS will also utilize the supercomputer to improve forecasts for El Nino and La Nina events, and other climate oscillations.

Next Generation Weather Radar (NEXRAD):

\$8.3 million

NOAA requests a total of \$8.3 million for the NEXRAD PAC account. The request will allow NWS to continue NEXRAD product improvement (NPI) activities by infusing new technology into the current radar network. The current system processor utilizes obsolete technology developed in the late 1980s. As a result, a number of new forecast and detection techniques, that are tested and ready for operational use, cannot run on the current system. Combined with AWIPS build 5.0 technology, NEXRAD NPI will allow NWS forecasters to improve the lead times for tornado warnings and the accuracy of severe thunderstorms forecasts. In FY 2002, NWS will complete critical hardware retrofits at a total of 126 NWS NEXRAD sites.



NWS Telecommunications Gateway Backup - Critical Infrastructure Protection: \$7.5 million

NOAA requests a total of \$7.5 million to provide critical infrastructure protection for the NWS Telecommunications Gateway (NWSTG). This investment will enable NWS to acquire the equipment and facility infrastructure necessary to ensure continuity of operations at the NWSTG. The NWSTG is the Nation's critical telecommunications hub for collecting, processing, and distributing weather data and information. The data processed by the NWSTG are used by hundreds of customers world-wide, affecting a wide-range of economic and emergency management decisions. These users include: the NWS WFOs and NCEP, the private meteorological industry, broadcast media, Foreign countries, and the U.S. Military. The current NWSTG facility, located in NWS headquarters in Silver Spring, MD has no operational backup and is therefore a single point of failure vulnerable to natural disasters, human error, computer viruses, hacker attacks, and terrorism. Today, if the NWSTG were to fail, 90 percent of weather observations required for weather prediction models would be lost; no national radar or prediction models would be sent to the field; no weather observations or products would be sent to commercial users/vendors;

no access or exchange of observations and products with other Federal agencies or Nations would be possible; and all NWS centrally provided Internet services would be halted. This investment will mitigate these risks and will enable the NWS to comply with Presidential Directives on critical infrastructure protection and continuity of government operations.

Radiosonde Replacement Network: \$5.0 million

NOAA requests a total of \$5.0 million to continue the replacement and modernization of the upper air radiosonde network. The radiosonde network provides critical upper air observations for NWS weather forecasters and serves as the principle data source for all weather forecast models. The current network is obsolete and nearing collapse, risking widespread loss of data within the next two to three years. In FY 2002, NWS plans to complete the third year of a multi-year modernization effort by replacing 35 (out of 102) ground tracking systems. NWS also plans to replace the remaining obsolete IBM XT microcomputers that are used to track and process data.

Construction

NWS Weather Forecast Office (WFO) Construction: \$12.0 million

NOAA requests a total of \$12 million to continue critical facility modernization efforts in the National Weather Service. The request represents an increase of \$2.5 million over the FY 2001 Enacted level. In FY 2002, NWS plans to finalize construction of the new Weather Forecast Office in Caribou, Maine and complete the new Alaska Tsunami Warning Center in Palmer, Alaska. NWS also plans to complete modernization of the weather offices in Hilo, Hawaii and Kotzebue, Alaska.

Detailed information regarding adjustments to base, program reductions, and terminations are shown in Section 4: Supplementary Information.







GOES (I-M) Spacecraft

GOES-8

National Environmental Satellite, Data, and Information Service

Total Request: \$738,038,000

ORF: \$131,662,000

PAC: \$606,376,000

The following narrative describes the activities of the National Environmental Satellite, Data, and Information Service (NESDIS) and its Operations, Research and Facilities (ORF) and Procurement, Acquisition and Construction (PAC) accounts requests.

NESDIS provides for procurement, launch, operation, data ingesting, and product development and distribution for the polar orbiting and geostationary environmental satellites. NESDIS is also responsible for the management of NOAA's environmental data collections and acquiring operational data from non-NOAA environmental satellites that include Department of Defense (DOD) and foreign satellite missions. The satellites provide meteorological data to the National Weather Service and other environmental data users. Environmental data and information are collected from NOAA and other sources, disseminated in real time, and archived for future use to meet the needs of users in commerce, industry, agriculture, science and engineering, and in Federal, state and local agencies.

NESDIS contributes to the achievement of six of NOAA's Strategic Plan goals: Advance Short-Term Warning and Forecast Services, Implement Seasonal to Interannual Climate Forecasts, Predict and Assess Decadal to Centennial Change, Recover Protected Species, Sustain Healthy Coasts and Build Sustainable Fisheries.

For FY 2002, the National Environmental Satellite, Data, and Information Service requests a total of \$738.0 million, of which \$131.7 million is requested in the ORF account and \$606.3 million is requested in the PAC account.

Significant Adjustments-to-Base

NESDIS requests a decrease of \$0.8 million to maintain current services and abate declining base resources from mandatory pay and inflation. Detailed estimates are as follows:

Mandatory Pay, Inflationary Costs, and Adjustment: \$4.3 million

NOAA requests an increase of \$4.3 million to fund Adjustments-to-Base (ATBs) for NESDIS base operations and system accounts. The increase will fund the FY 2002 federal pay raise of 3.6 percent and annualize the FY 2001 pay raise of 3.8 percent. The increase will also provide mandatory inflationary increases for non-labor activities, including service contracts, field office lease payments, and rent charges from the General Services Administration (GSA).

Restoration of FY 2001 Rescission: \$0.3 million

NOAA requests an increase of \$0.3 million to restore the FY 2001 rescission. Restoration of these funds in FY 2002 is required to sustain NESDIS operations.

Non-Recurring Terminations: -\$5.4 million

The NESDIS requests a decrease of \$5.4 million to reflect the termination or reduction of the following activities or programs: Center for Spatial Data Research and Application at Jackson State (-\$2.5 million); and Regional Climate Centers (-\$2.9 million)

Detailed Program Increase by Sub-Activity Operations, Research and Facilities (ORF)

Satellite Observing Systems \$75.9 million

NOAA requests a total of \$75.9 million in this sub-activity, an increase of \$15.7 million over the FY 2001 Enacted level. This sub-activity provides for the operation of current polar-orbiting and geostationary satellites, and production and distribution of satellite products for a wide range of Federal agencies, State and Local governments, and private users. As part of this sub-activity, funding will be provided for continuation of Ocean Remote Sensing, Global Wind Demonstration, National Hazards Information Strategy, and Environmental Observing Services.

Environmental Observing Services \$68.9 million

NOAA requests \$68.9 million for Environmental Observing Systems an increase of \$15.7 million over the FY 01 Enacted level. This continued investment supports the operations of all of the NESDIS satellite systems, the ingesting and processing of satellite data, and the development of

new product applications required for continuity of operations. NESDIS provides satellite command and control services on a 24 hours per day, 365 days per year schedule. Funding is required to keep up with increases in labor costs, software licensing, communications, and ground system maintenance. Requirements have expanded due to greater demands on operations and control, greater amounts of data requirements for new products, requirements for more advanced software and the development of improved products, and increased demand to support our user's requirements. As part of the total \$68,908,000 below are enhancement areas.

Commercial Remote Sensing License: \$1.2 million

NOAA requests within Environmental Observing Services, \$1.2 million for the Commercial Remote Sensing Licensing Program to ensure the timely review and processing of satellite license applications. This investment will be used to establish a program to provide technical support for such reviews, support of an industry advisory mechanism, and a computer infrastructure. Major Monitoring and Compliance activities will include review of quarterly licensee reports, on-site inspections, audits, license violation enforcement, and implementation of shutter control in national security and foreign policy crisis situations.

Joint Center for Satellite Data Assimilation: \$0.8 million

NOAA requests a total of \$0.8 million to establish a Joint Center for Satellite Data Assimilation with NWS and OAR in order to accelerate the use of satellite data in forecast models. This investment will fund work to accelerate the use of current and scheduled satellite data in NWS weather and climate prediction operations. NASA, with its own funding, will be a partner in a coordinated national effort to realize the full potential of the vast quantities of new satellite data that are becoming available. The core scientific staff and computing facilities of the Center will consist of current NOAA resources.

Coral Reef Monitoring: \$0.8 million

NOAA requests total of \$0.8 million for the development of a Coral Reef Watch Program to transition existing experimental satellite coral reef health monitoring capabilities into a viable operational capability, and to provide for a solid scientific basis for future monitoring and assessment products/capabilities. Coral Reef Watch strengthens NOAA's position as the world leader in operational environmental monitoring and early warnings. This is a joint NOAA effort spearheaded by NESDIS in partnership with OAR and NOS.

Critical Single Point of Failure: \$0.3 million

NOAA requests a total of \$0.3 million to study the requirements for backup capabilities for critical products and services at alternate sites. This investment supports the requirement to have continuity of critical operational satellite products and services in the event of a catastrophic outage. Federal Building 4 in Suitland, MD is potentially a single point of failure for every operational NOAA satellite product and service that the NWS and other users rely on.

Environmental Data Management Systems

\$55.8 million

NOAA requests a total of \$55.8 million in this sub-activity for environmental data and information systems, a decrease of -\$9.0 million from FY 2001 Enacted level. The FY 2002 request continues to provide environmental data and information to commerce, industry, agriculture, science and engineering, the general public, and Federal, State and Local governments. As part of this sub-activity, funding will be provided for continuation of the Climate Reference Network, National Coastal Ocean Data Development Center, and Climate Database Modernization and Utilization.

Data and Information Services: \$43.4 million

NOAA requests \$43.4 million for Data and Information Services. This continued investment, a decrease of \$6.2 million from FY 2001 Enacted level, will increase the Data Centers capacity to ingest, process, and archive data as well as continue the rescue of valuable environmental data. Requirements have expanded due to growing customer demands for data and products, and increased data management as the volume of new data continues to grow. Below are two enhancement areas of the Environmental Data Management Systems line.

- **Fisheries Oceanography: \$0.5 million**

NOAA requests \$0.5 million to explore using the full potential of modern technology in fishery resources monitoring, utilizing Synthetic Aperture Radar data. This investment would build on applications demonstrated in October 1999, for near real-time calculation of coastal ocean surface winds and vessel positions using RADARSAT-1 imagery in Alaska. Imagery would be produced at selected sites and sent in near real-time to the NESDIS Satellite Active Archive for imagery dissemination. NESDIS would also derive products from the SAR data for NOAA and other agencies such as the Coast Guard. The full system would consist of four reception capabilities specific sites, covering the entire U.S. coastal waters, which will host the required X-band antennas for reception of SAR data from the ENVISAT, ADARSAT II, and ALOS satellites.

- **Habitat Characterization: \$0.3 million**

NOAA requests a total of \$0.3 million to develop the ability to map fishery habitat distributions in space and time, and to answer important questions with such maps. A computer mapping capability will be created that will allow spatial/statistical delineations (stratification) of the landscape. Such maps can represent inferred ecosystem “potentials” that are critical in monitoring, assessment, and management. The system will allow rapid iteration of the mapping process, thus affording opportunities to test, modify, and document model criteria, statistical mapping technique, and data selection. In this manner, habitat maps can be adaptively maintained.

Procurement Acquisition and Construction Account (PAC)

Satellite Observing Systems

\$596.1 million

NOAA requests \$596.1 million for Satellite Observing Systems operations, an increase of \$96.1 million over the FY 2001 Enacted level. This sub-activity provides funding for the multi-year procurement of spacecraft, launches and associated ground system changes for the current series NOAA K-N' of polar-orbiting operational satellites, the National Polar Orbiting Operational Environmental Satellite System (NPOESS), and the Geostationary Operational Environmental Satellite (GOES).

NOAA Polar K-N: \$146.3 million

NOAA requests \$146.3 million for the NOAA Polar K-N', an increase of \$9.6 million over the FY 2001 Enacted level to fund the continuation of the production and launch of this series of satellites. This continued investment required to maintain spacecraft production. The request also includes funds necessary to complete the instruments for the European METOP satellites which will replace NOAA's morning polar orbiting satellite no earlier than calendar year 2005. Funding is included for upgrading and replacing aging and deteriorating ground systems to allow for continuation of operations for the remainder of the NOAA Polar K-N' series through the end of its lifetime in about 2012. In addition, funds provide for replacing and upgrading the aging product generation and distribution system.

NPOESS: \$156.6 million

NOAA requests \$156.6 million for the Polar Orbiting Systems, an increase of \$83.4 million over the FY 2001 Enacted level for NOAA's share of the converged NOAA/DOD/NASA polar-orbiting program. This program is to be jointly and equally funded by NOAA and DOD. In FY 2002, funds will be required to continue the post-Preliminary Design Review (PDR) development for the five most technologically challenging NPOESS instruments. Continuation of the instrument development contracts is critical to a successful risk reduction strategy for NPOESS to assure a successful schedule for the availability of the NPOESS satellites to replace both the Defense Meteorological Satellite Program and the NOAA Polar Orbiting Environmental Satellite system when needed. FY 2002 funds are also required to continue critical contracts on NPOESS program definition and risk reduction efforts which include the NPOESS Preparatory Project (NPP). The NPP is a joint NOAA/NASA program that will demonstrate and test new NPOESS instruments and data utilization systems before the launch of the first NPOESS satellite. In FY 2002, a single prime contractor to build and deploy the total NPOESS program will be selected.

GOES: \$293.3 million

NOAA requests \$293.3 million for the Geostationary Orbiting Environmental Satellite program an increase of \$3.1 million over the FY 2001 Enacted level for the systems spacecraft and launch services program. Funding is necessary to maintain continuity of geostationary satellites. In FY 2002 these funds will be used to continue funding the firm fixed price contract for GOES N-Q spacecraft and launch services which was awarded in January 1998. In addition, under separate contract, production will continue for the Imager and Sounder instruments required for these satellites. The production of the Solar X-ray Imager (SXI) instruments will also continue under a third contract. The first in this series of satellites will be available for launch in fall of 2002.

Construction

Continuity of Critical Facilities for Satellite Operations: \$4.6 million

NOAA requests a total of \$4.6 million to address deficiencies and risks associated with the infrastructure facilities of the NOAA environmental satellite command and control centers at Wallops, VA and Fairbanks, AK. This investment addresses sustaining satellite ground systems/control centers for the Fairbanks Command and Data Acquisition Station (FCDAS) and the acquisition of patent mining claims adjacent to FCDAS. This initiative forms a cohesive approach to resolving known infrastructure problems by reducing facilities' threats and risks, and completing the renovation/repair of the Satellite Operations Control Center. These problems could jeopardize NESDIS' ability to control the nation's environmental satellite systems and potentially lose in-orbit assets.



Program reductions and terminations are shown in Section 4: Supplementary Information.





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Program Support

Total Request: \$237,200,000

ORF: \$182,481,000

PAC: \$39,319,000

Other, Mandatory: \$15,400,000 ¹

Program Support has been realigned into three subactivities:

- 1) Corporate Services (formerly known as Administration and Services),
- 2) Office of Marine and Aviation Operations (OMAO), and
- 3) Facilities.

Within Program Support, Corporate Services has been subdivided into a) Under Secretary and Associate Offices and b) Policy Formulation and Direction. OMAO's portion of Executive Direction and Administration funds has been moved to OMAO, along with Aircraft Services funds. This realignment provides a clearer linkage of administrative services to NOAA program activities.

¹ These costs are for the retired pay of NOAA Corps officers.

Overall, NOAA requests a total of \$237.2 million for Program Support, a net increase of \$78.2 million above the FY 2001 Enacted level. This continued investment includes a total of \$182.5 million for Operations, Research, and Facilities (ORF) and \$39.3 million for Procurement, Acquisition, and Construction (PAC).

Corporate Services \$95.2 **million**

ORF: \$75,347,000

PAC: \$19,804,000

NOAA requests \$95.2 million for Corporate Services, a net increase of \$5.3 million over the FY 2001 Enacted level. This includes a total of \$75.3 million for ORF and \$19.8 million for PAC. Fundamental to NOAA's mission success is clarity of corporate vision, effectiveness of functional direction, and efficiency of operational support. The ORF amount includes funds for the Under Secretary and Associate Offices, Policy Formulation and Direction, and the Educational Partnership Program with Minority Serving Institutions.

- **Under Secretary and Associate Offices** - The Under Secretary and Associate Offices line item includes resources to provide centralized executive management and decisions concerning: NOAA policy and planning objective; statutory, budget resources, and other legal requirements; congressional relations; public and educational affairs; and strategic planning.
- **Policy Formulation and Direction** - The Policy Formulation and Direction line item includes resources to: develop and implement policy and planning objectives; support development and acquisition of major NOAA modernization systems; provide individual program operations; promote corporate budget priorities and financial management; provide timely, high quality, and cost-effective administrative support to NOAA and the Department of Commerce field programs; and ensure compliance with laws, regulations and guidelines.
- **Educational Partnership Program with Minority Serving Institutions** - The Educational Partnership Program with Minority Serving Institutions is one part of a larger Department of Commerce Center of Excellence Initiative. Minorities are under-represented among the Nation's professional scientists and among NOAA's scientific personnel. This program will increase the number of students that graduate and receive training in the natural and physical sciences by establishing four Collaborative Science Centers.

Significant Adjustments to Base

Corporate Services requests a net increase of \$5.3 million to maintain current services and abate declining base resources from mandatory pay and inflation. Detailed estimates are as follows:



Mandatory Pay, Inflationary Costs, and Adjustments: \$6.4 million

NOAA requests an increase of \$6.4 million to fund Adjustments-to-Base (ATBs) for Corporate Services' base operations. The increase will fund the FY 2002 federal pay raise of 3.6 percent and annualize the FY 2001 pay raise of 3.8 percent. The increase also will provide mandatory inflationary increases for non-labor activities, including service contracts and rent charges from the General Services Administration (GSA). Also included is the transfer of the Office of the Federal Coordinator for Meteorological Services and Supporting Research (OFCM) and its base funding of \$1.1 million from the National Weather Services to Corporate Services. The mission of this interdepartmental office is to ensure the effective use of federal meteorological resources by leading the systematic coordination of operational weather requirements and services and supporting research among 15 federal agencies.

Restoration of FY 2001 Rescission: \$324,000

NOAA requests an increase of \$324,000 to restore the FY 2001 rescission. This increase includes \$299,000 in ORF and \$25,000 in PAC. Restoration of these funds in FY 2002 is required to sustain Corporate Services' services. In FY 2002, Corporate Services will restore funding to provide critical training to office staff, purchase office supplies, and repair and maintain equipment.

Terminations: \$1.5 million

Corporate Services requests a decrease of \$1.5 million to reflect the completion of two Congressionally-directed, one-year activities: the NOAA study of NMFS' meeting its legal missions and requirements (\$748,000) and the National Academy of Sciences Oceanographic Study for OAR (\$748,000).

Detailed Program Changes by Sub-Activity

Operations, Research, and Facilities (ORF)

Under Secretary and Associate Offices \$24.0 million

The total request of \$24.0 million for the Under Secretary and Associate Offices represents an increase of \$2.6 million above the FY 2001 Enacted level. This continued investment will allow the Under Secretary and Associate Offices to continue to provide centralized executive management and decisions concerning policy and planning objectives; statutory and other legal requirements; congressional relations; public and educational affairs; and strategic planning. The \$2.6 million includes the adjustment to base to offset cumulative effects of deferring past adjustments to base, the restoration of the FY 2001 rescission, in addition to an increase of \$67,000 to facilitate coordination of interagency and intra-agency efforts and to address the Administration's new priorities. In addition, this request includes \$1.1 million for the Office of the Federal Coordinator for Meteorological Services.

Policy Formulation and Direction

\$51.4 million

The total request of \$51.4 million for Policy Formulation and Direction represents an increase of \$2.6 million above the FY 2001 Enacted level. This continued investment will allow Policy Formulation and Direction to continue to provide for NOAA's overall management of personnel, acquisition and grants, finance, facilities and logistics, and information technology system. These offices have had to take "belt-tightening" measures such as stretching equipment-replacement schedules, reduce training, lapsing some replacement personnel and maintaining some vacancies.

Central Administration Support: \$32.2 million

The total request of \$32.2 million for Central Administration Support represents a decrease of \$842,000 below the FY 2001 Enacted level. This continued investment will allow the four field offices to provide timely, high-quality, cost-effective administrative support to all of NOAA and to the Department of Commerce programs in the field, while ensuring that all laws, regulations, and guidelines are followed.

Educational Partnership Program with Minority Serving Institutions (EPPMSI): \$15.0 million

The total request of \$15.0 million for EPPMSI represents an increase of \$33,000 above the FY 2001 Enacted level. This initiative is one part of a larger Department of Commerce Center of Excellence Initiative. Minorities are under represented among the nation's professional scientists, and among NOAA's scientific personnel. This program will increase the number of minorities that graduate and receive training in the natural and physical sciences by establishing a Collaborative Science Center for each field of study at three MSIs, centered around distinguished faculties with expertise in these scientific disciplines. The funds will provide financial support for graduate study, an Environmental Entrepreneurship Program, and a student fellowship program targeted for third-year undergraduates. NOAA will also provide internship opportunities for these students. The number of minorities graduating with science and engineering degrees continues to be disturbingly low. By targeting students at MSIs, this initiative will provide NOAA and the MSIs with the means of strengthening their educational outreach to minority communities and populations, thus helping to correct this professional and educational imbalance.

Systems Acquisition Office (SAO): \$0.7 million

The total request of \$712,000 for the Systems Acquisition Office (SAO) represents an increase of \$2,000 above the FY 2001 Enacted level. This continued investment will allow SAO to provide oversight and control of acquisition of NOAA major systems and to assist NOAA organizations in the assessment of needs and development of future systems requirements. The SAO provides procurement and engineering expertise for complex systems acquisitions and technical projects throughout NOAA and effectively administers NOAA acquisition resources. The SAO has strengthened NOAA management of systems acquisition by consolidating responsibility for the design, procurement, and acceptance of new systems into a single NOAA acquisition office and by maintaining a balance among technical requirements, cost/schedule constraints, and user needs.

Restoration of DOC Security Appropriation: \$3.4 million

NOAA requests \$3.4 million for restoration of security funding for NOAA's facilities and personnel to the level funded in FY 2000. This will ensure that NOAA's personnel and assets are adequately and uniformly protected. The FY 2001 President's budget requested a separate line item in the Department of Commerce's budget to fund management and delivery of security services, with funds transferred from the various bureau's budgets to offset the new appropriation. The FY 2001 appropriation failed to provide the requested funding as a direct appropriation, nor did it restore NOAA budgets to support this critical function. Since this critical requirement must be maintained, NOAA is being forced to offset the cost by reducing programmatic requirements. This request will allow for the restoration of the funding requirement.

Procurement, Acquisition , and Construction (PAC)

CAMS

\$19.8 million

The PAC request of \$19.8 million for the Commerce Administrative Management System (CAMS) represents an increase of \$25,000 above the FY 2001 Enacted level. This continued investment will allow for the full benefit and value of CAMS to be realized in NOAA. CAMS is in the final stages of completion, and adequate funding will ensure that CAMS is deployed in a timely manner, allowing all modules to progress toward completion. Once fully deployed, CAMS will contribute in significant ways to maintaining a clean NOAA audit through systematic controls rather than through labor-intensive manual efforts. It will provide managers with on-line, real-time, and accurate financial information and will enable NOAA and DOC to meet statutory obligations under the Federal Managers' Financial Integrity Act (FMFIA) and the Chief Financial Officer Act (CFO Act).



Office of Marine and Aviation Operations

Total Request: \$124,048,000

ORF: \$89,133,000

PAC: \$19,515,000

OTHER: \$15,400,000

The Office of Marine and Aviation Operations (OMAO), using ships and aircraft, collects data required to meet NOAA's mission and provides operational, technical, and managing support to NOAA programs through the NOAA Commissioned Corps. OMAO operates and maintains NOAA's fleet of 15 research and survey ships and 13 aircraft and assists with outsourcing for ship and aircraft support. These platforms support the missions of NOAA's five line offices and support all of the seven goals in the strategic plan. OMAO manages the NOAA Diving Program, which provides support to the largest complement of divers of any civilian federal agency.



NOAA Ship *Gordon Gunter*, a converted T-AGOS ship. The T-AGOS ship *Adventurous* is scheduled for a similar conversion in 2001.



NOAA's Gulfstream Jet is used for hurricane surveillance.

NOAA's diverse fleet of ships conducts research and gathers data relating to the oceans and the atmosphere. The ships have varied scientific capabilities and range from small coastal craft used for research in estuaries and near-shore areas to deepwater oceanographic ships that provide scientists access to the waters of the world. The ships conduct hydrographic surveys to support nautical charting requirements, oceanic and atmospheric research to determine both short- and long-term global climate changes, fisheries stock and marine mammal assessments, and monitoring of coastal habitats and pollution trends. NOAA ships also provide immediate response capabilities for unpredictable events, such as the search and location of wreckage from EgyptAir Flight 990, John F. Kennedy, Jr.'s aircraft, and TWA Flight 800.



NOAA's hydrographic ship *Rainier* & its launches conduct surveys in Alaska

NOAA's fleet of aircraft conduct research and collect data on the atmosphere, environment, and geography. The aircraft collect data throughout the United States and around the world, over open ocean, mountains, coastal wetlands, and the Arctic pack ice. NOAA aircraft conduct varied missions such as flying into hurricanes and winter storms to determine their intensity and path, air-quality research, aerial photography for shoreline surveys, marine mammal and fish surveys, and snow surveys to determine water measurements for predicting spring floods from snow melt.

The NOAA Commissioned Corps is the nation's seventh and smallest uniformed service. The officers of the NOAA Corps command NOAA's research and survey vessels, fly NOAA's "hurricane hunter" and environmental monitoring aircraft, work on mobile field survey parties, and serve in a variety of technical and management positions throughout the agency.

NOAA also meets ship- and aircraft-support needs with ships and aircraft from other sources, including the private sector and the university fleet. These platform charters help meet NOAA's needs for oceanographic and fisheries research data. NOAA also contracts directly for collection of approximately 50 percent of its hydrographic data collection needs.

The ORF funds shown above include funds for operation, maintenance, routine repair and outsourcing of aircraft and ships. The PAC funds shown above are for ship conversion and rehabilitation.

For FY 2002, NOAA requests a total of \$124.0 million for OMAO, including \$89.1 million in ORF, \$19.5 million in PAC, and \$15.4 in Other, Mandatory. The mandatory amount, which remains at the same level as in FY 2001, is for payments required as an entitlement to OMAO commissioned officers under 33 U.S.C. 853o, 33 U.S.C. 853p, and 33 U.S.C. 857-2. These funds are transferred directly to the Coast Guard each year.

Significant Adjustments to Base: OMAO's base had a net increase of \$63.0 million due to restoration of the rescission and receipt of adjustments to base for OMAO programs, including a technical

the rescission and receipt of adjustments to base for OMAO programs, including a technical adjustment of \$62.0 million to transfer Acquisition of Data from the NOS, NMFS, and OAR to OMAO. The transfer will allow for the management of the fleet operations as a NOAA-wide asset. This increase also will fund the FY 2002 pay raise and will provide inflationary increases for certain non-labor activities including service contracts.

Detailed Program Increases by Sub-Activity

Operations, Research, and Facilities (ORF)

Aircraft Services

\$14.2 million

The total request of \$14.2 million for Aircraft Services represents an increase of \$2.4 million above the FY 2001 Enacted level. This continued investment will allow Aircraft Services, which operates a fleet of 13 NOAA aircraft, to complete a second flight crew for the G-IV aircraft and to add 300 additional flight hours and associated dropwindsondes for data collection for Hurricane & Severe Winter Storm Prediction (\$888,000) and for Ocean Winds Research (\$600,000). The completion of the second flight crew for the G-IV will allow for 24-hour hurricane or winter storm coverage needed to increase lead time for hurricane evacuations and reductions in unnecessary warnings. The additional flight hours will allow improved winter storm prediction. The increase for flight hours for Ocean Winds Research will provide data to calibrate satellite wind instruments.. This is critical for planning for future deployment of satellite sensors.

Marine Services

\$74.9 million

The total request of \$74.9 million for Marine Services, largely for data acquisition, represents an increase of \$64.0 million above the FY 2001 Enacted level. This continued investment will allow the consolidation of funds for marine services under OMAO. The funds previously were transferred to OMAO on an annual basis from NOS, NMFS, OAR, and Executive Direction and Administration. This consolidation will promote a more efficient and flexible utilization of resources through an enhanced centralized management of NOAA's vessels operations. Funds for Data Acquisition have been moved to OMAO permanently, since they provide for NOAA-wide assets.

Marine Services operates a fleet of 15 NOAA vessels capable of safely collecting hydrographic and coastal assessment data, conducting fishery independent scientific and survey operations, and conducting sustained oceanographic and atmospheric data collection in various marine environments and provides funds for outsourcing to meet many data-collection requirements. The request includes an increase of \$1 million to provide days-at-sea, primarily through charter vessels, to support research in the Gulf of Mexico concerning the interactions of the Mississippi River plume, nutrient loading, and resulting hypoxia of Gulf fisheries. The funding also will maintain or increase day-at-sea levels supporting other NOAA programs, including the science programs in NOS and the sanctuary program. In addition, an increase of \$855,000 will be used for both the ADVENTUROUS' operating differential and to add days-at-sea on fisheries research vessels. The ADVENTUROUS will replace the TOWNSEND CROMWELL and is a

larger and more capable vessel that will carry more scientists to complete more research on a daily basis.

Procurement, Acquisition, and Construction (PAC)

Fleet Replacement

\$19.5 million

The total request of \$19.5 million for OMAO's fleet replacement represents a decrease of \$242,000 million below the FY 2001 Enacted level. This continued investment will allow the remaining funds to be used for the following items:

ADVENTUROUS Refurbishment

\$4.2 million

The total request of \$4.2 million for the ADVENTUROUS represents a decrease of \$3.8 million below the FY 2001 Enacted level. Funding in the amount of \$8.0 million was provided in FY 2001 to begin the conversion of the ADVENTUROUS to a fisheries research vessel to replace the aging TOWNSEND CROMWELL home-ported in Honolulu, Hawaii. This continued investment will allow OMAO to complete the conversion and upgrade of the vessel.

ALBATROSS IV Repairs

\$4.0 million

NOAA requests a total of \$4.0 million for repairs to the NOAA ship, the ALBATROSS IV. This investment will allow OMAO to extend the ship's useful life until a new FRV is delivered to the Northeast Fisheries Science Center (NEFSC), located in Woods Hole, MA. The ALBATROSS IV must be operated beyond FY 2006 to protect the integrity of long-term surveys of fish stock.

FAIRWEATHER Refurbishment

\$9.5 million

The total request of \$9.5 million for the FAIRWEATHER represents an increase of \$2.7 million above the FY 2001 Enacted level. This continued investment will allow OMAO to complete the refurbishment of the NOAA ship. The amount of \$6.8 million was appropriated in FY 2001 to begin this effort, and a total of \$9.5 million will be needed in FY 2002 in order to complete the project. The refurbishment of the FAIRWEATHER, with its home-port in Alaska, will provide a platform which will allow significant progress to be made in reducing the critical backlog of hydrographic surveys.

GORDON GUNTER Upgrade

\$1.8 million

NOAA requests a total of \$1.8 million for the upgrade of the NOAA ship, the GORDON GUNTER. This investment will allow OMAO to fully meet modern safety standards and provide a more capable platform to support fisheries research and stock assessment projects. The upgrade will include modifications to an engine room bulkhead that will enable the ship to meet modern safety standards for one-compartment damage stability. This will allow a compartment to be fully flooded and the ship to

remain afloat with stability. The increase would also provide positioning and instrumentation upgrades.

Naval Surplus Vessel for Coastal Research (YTT)

NOAA is not requesting any funding for the YTT in FY 2002, which represents a decrease of \$5.0 million below the FY 2001 Enacted level. Funding for the partial conversion of the YTT was provided in FY 2001. This phase has been completed, allowing the vessel to be used for some coastal research.

Detailed information regarding adjustments to base, program reductions, and terminations are shown in Section 4: Supplementary Information.



Silver Spring, Maryland



Santa Cruz, California

Facilities

Total Request: \$18,001,000

ORF: \$18,001,000

NOAA's strategic mission and activities require state-of-the-art facilities and high technology capabilities located nationwide. NOAA has a facility inventory of assets valued in the tens of millions of dollars, with physical properties in every state and territory, and inclusive of specialized laboratories, large and small concentrations of office and storage space, and remote observations. NOAA headquarters and its field installations are major national assets, and they are fundamental to the accomplishment of NOAA's mission. NOAA must provide safe, healthful facilities that comply with state and local regulations; that are in good repair and run efficiently; and that are in locations that support and enhance agency missions. The integral relationship between the physical infrastructure of the facilities we occupy and the research and operations conducted in those facilities contributes directly to the attainment of the seven goals of NOAA's strategic plan, and NOAA's mission to support the Nation's economic growth in an environmentally sound manner.

NOAA's facility program responsibility is to plan, acquire, maintain, and support NOAA's facility to continue to successfully fulfill NOAA's missions. The facilities program encompasses land and facility acquisition and construction; repairs, modifications, and additions to NOAA-operated facilities; environmental compliance; facilities maintenance; and ensuring a high standard of employee health and safety.

Significant Adjustments to Base

Facilities' base had a net increase of \$6.8 million, of which \$6.0 million is a transfer of cleanup funds for Pribilof Island from the PAC account to the ORF account. The balance of the net increase (\$808,000) is due to restoration of the rescission (\$38,000) and receipt of adjustments to base for the NOAA Maintenance, Repairs, and Safety program (\$770,000). This increase will fund the FY 2002 cost-of-living pay increase for the Facilities Office and provide inflationary increases for certain non-labor activities including service contracts.

Detailed Program Increases by Sub-Activity

Operations, Research and Facilities (ORF)

NOAA Facilities Maintenance, Repair and Safety **\$3.6 million**

The total request of \$3.6 million for Facilities Maintenance, Repairs and Safety activities represents an increase of \$1.8 million above the FY 2001 Enacted level. This continued investment will allow Facilities to pursue the elimination of numerous health and safety issues related to the poor condition of NOAA's facilities. These funds will address NOAA's current backlog of projects in the Capital Improvement Program (CIP) and will begin the establishment of a focused NOAA safety program. The CIP provides for major repairs, renovations and alterations to NOAA facilities. The CIP's purpose is to identify and correct deficiencies in those facilities, to include needed major and minor repairs, renovations and alterations, and provide limited construction of "like" replacement space. Scientists' abilities to perform advanced research has been constrained in some cases by obsolete and inadequate laboratory facilities.

NOAA employees may be subject to health and safety threats, including sinus problems and allergic reactions from inadequate ventilation standards, employees accidents related to poorly maintained stair coverings and floors, and potential structural failure and collapse. The social consequence of poor facilities may be seen in reduced worker productivity, poor morale and an inability to attract and retain personnel.

The NOAA Maintenance, Repair, and Safety program vision is to provide to NOAA units a national network of facilities that are safe and healthful, in compliance with all existing Federal, state and local laws and regulations, efficient, in proper repair, in appropriate locations and configurations, and designed to fully support and enhance the completion of agency missions.

Boulder Facilities Operations **\$5.0 million**

The total request of \$5.0 million for Boulder Facilities Operations represents an increase of \$1.0 million above the FY 2001 Enacted level. This continued investment will allow Facilities to fully fund the operating costs for space, above-standard utilities, maintenance and security at the new David Skaggs Research Center. By providing sufficient funds to meet the requirements negotiated with GSA, this initiative will avoid an overall base reduction to NOAA's Boulder organizations of approximately 2.3 percent.

Pribilof Island Cleanup **\$4.0 million**

The total request of \$4.0 million in ORF for the Pribilof Island Cleanup represents a decrease of \$2.0 million below the FY 2001 Enacted amount previously in the PAC account. This continued investment will enable NOAA to continue restoration work on the Pribilof Islands. The environmental cleanup includes treating petroleum-contaminated soils, continuing actions related to the closure of the existing landfill, and remediation at various sites and the NOAA portion of an oil-drum dump site. Under P.L. 104-91 and the "Two-Party Agreement between NOAA and the State of Alaska, NOAA is responsible for an extensive environmental cleanup on the islands in preparation for transfer of Federal lands on the islands to the local communities. The specified cleanup activities will be undertaken primarily through grants or other agreements with qualified contractors and/or local entities and residents of the Pribilof Islands.



The NOAA Strategic Plan

An FY 2002 Overview

For the year 2005, NOAA envisions a world in which societal and economic decisions are coupled strongly with a comprehensive understanding of the environment. Environmental stewardship, assessment and prediction will serve as keystones to enhancing economic prosperity and the quality of life, better protecting lives and property, and strengthening the U.S. balance of trade. This vision depends on actions now that:

- Create and disseminate reliable assessments and predictions of weather, climate, space environment, ocean and living marine resources, nautical, and geodetic phenomena and systems.
- Implement integrated approaches to environmental management and ocean and coastal resources development for economic and social health, protection of essential fish habitat, and recovery of endangered and threatened species of fish and marine mammals.
- Ensure access to continuous operations observing capabilities - from satellites to ships to radars and submersibles.
- Build and use new information networks.
- Develop public-private and international partnerships for the expansion and transfer of environmental knowledge and technologies.
- Invest in scientific research and the development of new technologies to improve current operations and prepare for the future.
- Improve NOAA's abilities to serve its customers and forge stronger ties with its partners and stakeholders.

Achieving NOAA's Vision for 2005

- NOAA's Strategic Plan describes the goals and objectives that have been established to fulfill its vision. The strategy consists of seven interrelated goals that are grouped within the two missions of Environmental Assessment and Prediction, and Environmental Stewardship. The execution of NOAA's goal-based strategy depends strongly on a stable and robust infrastructure and administrative and human resources, as well as on the underlying capabilities of the agency as a national resource for research, observing systems, and environmental data and information services.

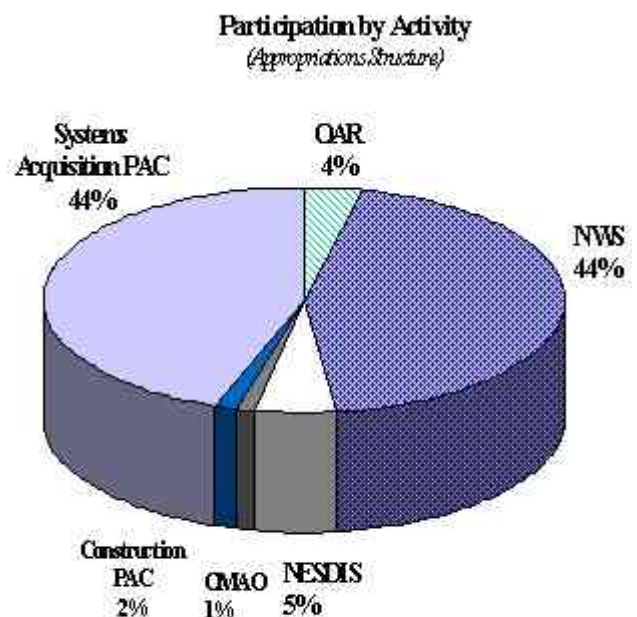


Advance Short-Term Warning and Forecast Services

Total Request: \$1,474,441,000

Vision - NOAA's vision for 2005 is to provide significantly improved short-term warning and forecast products and services that enhance public safety and economic productivity to the Nation. NOAA will enhance its ability to observe, understand, and model the environment, and effectively disseminate products and services to users.

Challenge - Our environment has profound effects on human welfare and economic well being. Each year, hundreds of lives and billions of dollars are lost due to severe storms, floods and other natural events that can be predicted minutes to months in advance. NOAA's current ability to predict short-term change is restricted by observations that are incomplete in time and space. This limits the ability to improve basic understanding, and predictive modeling of weather and other natural phenomena. NOAA is committed to improving its observing systems, developing a better understanding of natural processes, and enhancing its predictive models and dissemination systems.



Implementation Strategy - The objectives of this goal are to:

- Sustain modernized weather service operations
- Maintain continuous operational satellite coverage critical for warnings and forecasts
- Strengthen observing and prediction systems
- Improve customer service to the public, emergency managers, the media, and private forecasters.

Benefits - Increasing our understanding of the environment through research and investing in new technologies will provide more accurate and timely weather warnings and forecasts required by the Nation. Improved geomagnetic forecasts will increase efficiencies for satellite operations and communications and electronic power distribution networks. Advanced modeling techniques and more complete observations will reduce uncertainties in hurricane track prediction, saving millions of dollars, and will improve inland flood prediction, saving lives and property. Accurate outlooks of future conditions will provide better information for planning weather sensitive activities over land and ocean. Critical contributions for the Natural Disaster Reduction Initiative will be provided from the research, monitoring and operational program in this NOAA goal.

Improvements associated with the modernized weather services have allowed for huge dividends. A cost-benefit analysis by the National Institute of Standards and Technology estimated economic benefits to the Nation to be about eight times greater than the costs involved. The Nation should realize annual benefits approaching \$7 billion from the modernization. It is now time to take full advantage of the modernization.

FY 2000 Accomplishments - The Nation continued to benefit from the NWS \$4.5 billion modernization efforts, with improved and exemplary weather forecasting and warning services being provided around the Nation in FY 2000.

Provided Exemplary Services in the February Georgia Tornadoes: During February, NOAA provided tornado warnings from 33 - 59 minutes (three to six times faster than the average tornado warning) for residents in Georgia, enabling citizens to get out of harm's way. The NOAA Weather Radio's tone alert feature was credited with waking people up providing time for them to seek safe shelter.

Provided Support to Wildfires in Southwest and Western U. S.: During the Spring and Summer, NOAA had 14 Incident Meteorologists (IMETS) on site to assist other federal agencies with an increasing number of wildfires. Through July, the National Weather Service (NWS) dispatched IMETS to work the equivalent of 550 days on wildfires. Over 60,000 wildfires have burned nearly 3.5 million acres this year, making this the worst fire season in 30 years.

Unveiled "StormReady" Program: NWS designed a program to help cities, counties, and towns implement procedures to reduce the impact of natural weather disasters. "StormReady" provides clear recommendations for communities to improve their warning and preparedness for hazardous weather operations. Local communities are certified as "Storm Ready" for their jurisdiction by meeting criteria established by the NWS in partnership with federal, state and local emergency management professionals.

Launched Geostationary Operational Environmental Satellite, GOES - L: During May, NOAA launched its newest satellite, GOES - L. GOES satellites are vital to weather forecasting in the U.S. and aide weather forecasters in providing better warnings of severe weather.

- *Launched Polar Orbiting operational Environmental Satellite, NOAA-L:* In September, NOAA launched the second satellite of its newest advanced series of polar-orbiting satellites. This satellite places the second set of advanced microwave instruments in orbit to allow for improved daily global sensing of atmospheric weather and climate parameters in cloudy regions.

Provided New Weather Products: In response to customer and partner needs, NOAA extended its precipitation guidance products from two to three days and developed a probabilistic winter weather guidance product for snow and ice.

Installed the new IBM SP SuperComputer: In FY 2000, NOAA installed the new IBM SP SuperComputer and transferred over 126,000 products to the new system.

Released Public Service Announcement Warning Against Driving Through Flooded Areas: The National Association for Stock Car Auto Racing's Darrell Waltrip and NOAA's NWS teamed up to provide a new public service announcement warning of the dangers of driving on flooded roadways. Floods are responsible for more deaths each year than any other weather-related phenomena, and of these fatalities, about half (more than 50 annually) are caused when people try to drive through flooded roadways.

- *Completed Severe Thunderstorm Electrification and Precipitation Studies (STEPS) Field Program:* From May through July, NOAA scientists joined researchers from about a dozen organizations to study thunderstorms and lightning in the High Plains, with the goal of improving severe weather forecasts. Supercell thunderstorms are considered to be the most dangerous type of storm due to the extreme weather generated, including tornadoes, large hail and flooding.

Key FY 2002 Activities

- Sustain NWS modernized operations
- Provide an adequate preventative and cyclical facilities maintenance program
- Provide operation and maintenance support for 152 fielded Advanced Weather Interactive Processing Systems (AWIPS)
- Continue AWIPS Build 5.0 development activities (3rd year of 3 year effort)
- Continue NEXRAD and ASOS planned product improvement initiatives
- Make final lease payment on the Class VIII supercomputer
- Provide critical infrastructure protection for the NWS Telecommunication Gateway, a critical link in the national and international infrastructure that collects and distributes weather data
- Continue the radiosonde replacement program to ensure critical upper air data
- Continue the procurement, launching, and operation of polar orbiting satellites and the follow-on series of geostationary weather satellites
- Conduct required data assimilation and numerical modeling activities which are vital to the NWS

- forecast process
- Continue the national implementation of the Advanced Hydrologic Prediction Service (AHPS) in the Upper Midwest and tributaries within the upper Ohio River Basin
 - Perform research to improve the forecast accuracy and lead-time for hurricane tracking and landfall prediction through assessments, analysis of enhanced data sets, and simulations.
 - Support the multi-year procurement of spacecraft, launches and associated ground system changes from the current series NOAA K-N of polar-orbiting satellite System (NPOESS), and the Geostationary Operational Environmental Satellite (GOES).
 - Establish a Joint Center for Satellite Data Assimilation to accelerate the use of satellite data in numerical weather prediction models.

Key Performance Measures

	1997 act.	1998 act.	1999 act.	2000 act.	2001 est.	2002 est.
Tornado Warnings						
Lead Time (minutes)	10	11	12	10	13	13
Accuracy (percent)	59	66	70	63*	68**	70**
* False Alarm Rate (percent)			72	76*	73**	70**
Flash Flood Warnings						
Lead Time (minutes)	45	52	41	43	45	48
Accuracy (percent)	82	85	83	86	86	86
Winter Storm Warnings						
* Lead Time (hours)			11	9	13	14
* Accuracy (percent)			85	85	86	87
Hurricane Warnings						
* Lead Time (hours)			19	N/A	21	22
Aviation Forecasts (Ceiling/Visibility)						
* Accuracy (percent)						
* False Alarm Rate (percent)			19 52	15 53*	21 51**	23 47**
Marine Forecasts (Wind/Wave)						
* Accuracy (percent)			50	50	53	55
Precipitation Forecasts						
* Accuracy of 3-day Forecast (percent)				16	22	24
* Represents new measures						

N/A - represents no landfalling hurricanes in 2000

* FY 2000 Actual performance measures modified due to additional verification and quality control procedures in February, 2001.

** FY 2001 and 2002 Performance measures modified based on actual performance in FY 2000.



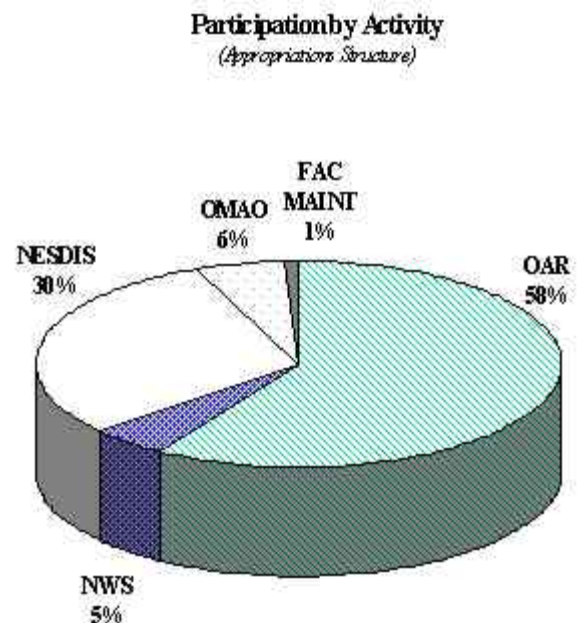
The NOAA Ship KA'IMIMOANA deploying weather buoys in the Pacific.

Implement Seasonal to Interannual Climate Forecast

Total Request: \$142,206,000

Vision - NOAA, working together with academic and multinational partners, will provide forecasts of global climate variability with lead-times of one-year and longer, focusing on the effects of El Niño.

Challenge - The largest predictable interannual climate variations are caused by the El Niño-Southern Oscillation (ENSO) phenomenon in the Pacific Ocean. ENSO causes changes in temperature and precipitation patterns, in ocean circulation, and in storm frequency. These changes have global effects. NOAA issues monthly and seasonal probability outlooks for temperature and rainfall based on the application of ENSO research and has successfully forecast the 1997-1998 El Niño six months in advance. ENSO-related effects range from severe drought to intense storms. The ability to improve the accuracy and reliability of multi-season forecasts requires the incorporation of the effects of other longer term modes of climate variability such as the North Atlantic Oscillation and the Pacific Decadal Oscillation, into improved models. The impact of global



change on short-term climate variability must also be understood. This requires better understanding of climate process and can only be achieved with an enhanced global observing system. NOAA must develop an expanded suite of operational products which predict changes on one week to multi-season time scales.

Implementation Strategy - Key issues for the public and decision makers are: (1) the monitoring, description, and dissemination of current state of climate; (2) understanding of unusual or extreme climate conditions; and (3) predictions of important climate variables on time scales from a few weeks to more than a year.

The objectives of this goal are to:

- implement climate prediction systems to deliver useful seasonal to interannual climate forecasts for the U.S. and collaborate in a multinational effort to generate and use similar forecasts;
- enhance global observing and data systems required for the improvement of model predictions of seasonal to interannual climate variations;
- invest in process and modeling research to improve predictability of temperature and rainfall distributions; and
- assess the human and economic impacts of climate variability and improve public understanding of climate forecasts.

Benefits - We can now predict El Niño events with sufficient accuracy and lead time that savings of hundreds of millions of dollars a year can be realized in the both the National and global economies. Climate services will be as important economically in the 21st Century as weather forecasting is today. Improved climate forecasting will benefit producers and consumers in many sectors by improving decision making. A cost-benefit analysis of one ENSO research effort, the Tropical Ocean Global Atmosphere (TOGA) program, shows return on investment of at least 13% - 26% for U.S. agriculture. Agricultural savings of more than \$300 million annually are estimated to result from further forecast improvements. These forecasts will also improve management of fisheries, water resources, and other sectors and resources sensitive to weather and climate variations.

FY 2000 Accomplishments

The Seasonal to Interannual Climate team made strides in forecasting, outreach, research, and observations. The major FY 2000 accomplishments are described below.

Forecasting Accomplishments:

- Achieved record high skill scores for temperature in outlooks for May 2000 and March-April-May 2000.
- Forecast the 1998-1999 La Niña six months in advance; correctly predicted cooler-than-normal sea surface temperatures in the eastern Pacific Ocean; successfully predicted the continuation of La Niña through the winter of 1999-2000; and achieved exceptional skill scores for the third straight year.

Operationalized four new, significant forecast products:

- U.S. Threats Assessment: a weekly outlook for droughts, heat waves, heavy precipitation, wild fires, and other extreme events on time scales from 3 to 14 days.
- U.S. Drought Monitor: an estimate of current drought conditions
- Seasonal U.S. Drought Outlooks: which predict seasonal drought conditions.
- Excessive Heat Outlook products

Outreach Accomplishments:

- Established an administrative focus for climate services at the NWS to forge and maintain links between NOAA's offices involved in seasonal to interannual climate predictions, other federal agencies, Regional Climate Centers, local officials and private customers. The new office, within the Climate Services Division of the NWS, is also responsible for climate policy and constituent requirements for the NWS.
- Began formulating a climate services training program for NWS field personnel to ensure that field offices can adequately respond to customer inquiries.
- Completed major overhaul of the Climate Prediction Center's (CPC) web site to include improved links, complete indices, and most popular products list.
- The American Society of Civil Engineers published the book "Using Meteorology Forecasts in Operational Hydrology" which explains how NOAA's short term and seasonal forecasts can be used for water resource management.

Observational and Research Accomplishments:

- Successfully implemented the Climate Database Modernization Program (CDMP) established to ensure valuable climatic data and information would be available to the public, researchers, and economic and political decision makers.
- Demonstrated a ship-borne wind profiler for continuous monitoring of ocean winds as well as dual-wavelength profilers to identify the nature of precipitating systems.
- Developed the Flexible Modeling System. This product and the Diagnostic Web-Atlas tools provide researchers with capabilities to support a wide range of applications.
- Implemented a five year study, Eastern Pacific Investigations of Climate (EPIC), designed to improve understanding of key features in the Eastern Pacific.
- Demonstrated a statistical link between sea surface temperature anomalies during the fall season and the Madden-Julian Oscillation (MJO) activity during the subsequent winter.
- Instituted the Satellite Active Archive which has made over 7 terabytes of polar-orbiting satellite data available to the environmental research community each year.

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Key FY 2002 Activities

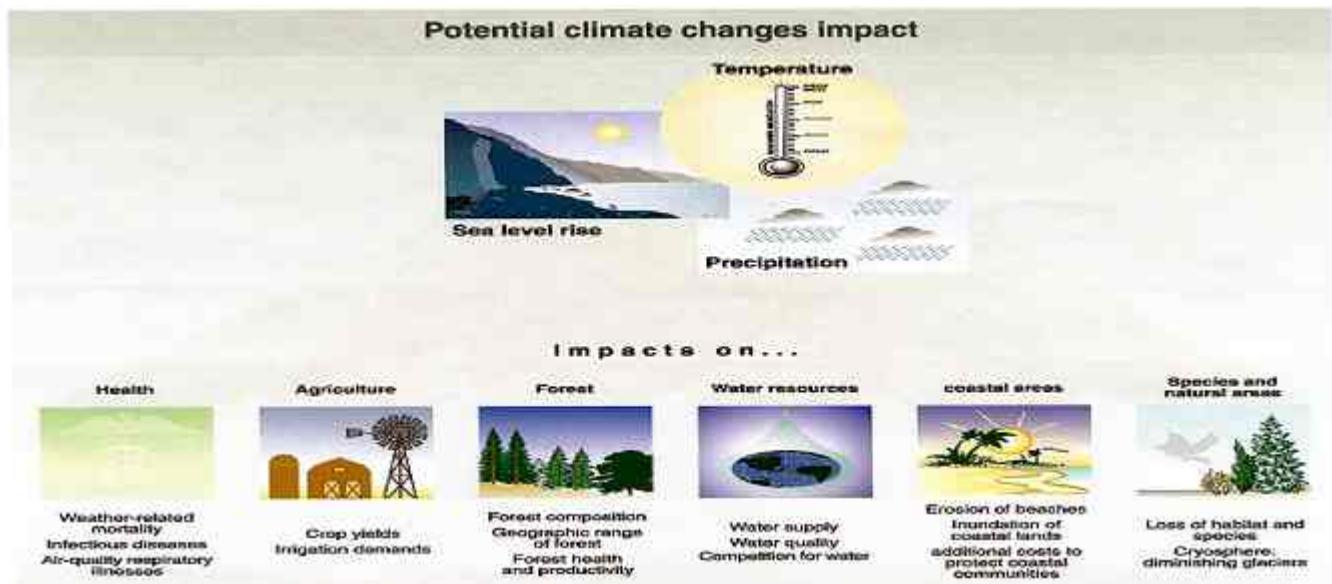
Future plans include an integrated suite of forecast products to provide regionally specific weather and climate information for time scales ranging from hours to days to weeks to seasons to years. We will enhance short-term warning forecasts and predictions of decadal-to-centennial change by working with other NOAA climate researchers. These forecasts will provide longer lead times for warnings about extreme weather events. We will extend weather and climate predictions to cover periods ranging from one week to several seasons.

Specific FY 2002 activities to include:

- Continue to translate the improved understanding of climate variability resulting from enhanced climate monitoring capabilities into better models.
- Maintain and improve data delivery systems to serve the rapidly increasing demands for new climate services.
- Improve the availability of climate reference data sets that are now widely used by the operational and research climate community.
- Establish and maintain the sustained global observing system necessary for climate research and forecasting as well as the long-term monitoring system necessary for climate change detection and attribution.
- Ensure the continuity of the current U.S. (NASA) and French satellite altimetry programs, TOPEX and JASON, through the next decade.
- Conduct El Niño - Southern Oscillation (ENSO) research.
- Improve access to NOAA climate data holdings for the public and decision makers.

Key Performance Measures

	1997 act.	1998 act.	1999 act.	2000 act.	2001 est.	2002 est.
ENSO Forecasts accuracy (correlation) 1/	.81	.85	.85	.84	.85	.85
U.S. Temperature skill score 2/	22	23	24	25	20	26
Number of new monitoring or forecast products that become operational per year 3/	N/A	N/A	N/A	N/A	4	4
New climate observations introduced 4/	N/A	N/A	N/A	N/A	120	150
<p>1/ Accuracy is the correlation of the forecast with actual conditions.</p> <p>2/ For those areas of the United States where a temperature forecast (i.e., warmer than normal, cooler than normal, normal) is made, this score measures how much better the prediction is than the random chance of being correct. Skill score is based on a scale of -50 to +100. If forecasters match what would be predicted by random chance, the skill score is 0. Anything above 0 shows positive skill in forecasting. Given the difficulty of making advance temperature and precipitation forecasts for specific locations, a skill score of 20 is considered quite good and means the forecast was correct in almost 50 percent of the locations forecasted. Forecasts will likely be better in El Niño years than in non-El Niño years.</p> <p>3/ New performance measure added for FY 2001. Reflects customer service goal of the SI team.</p> <p>4/ New performance measures added for FY 2002. Reflects the goal of the SI team to increase the density of global climate observations to improve short-term to longer-term forecasting and assist in research and modeling.</p>						

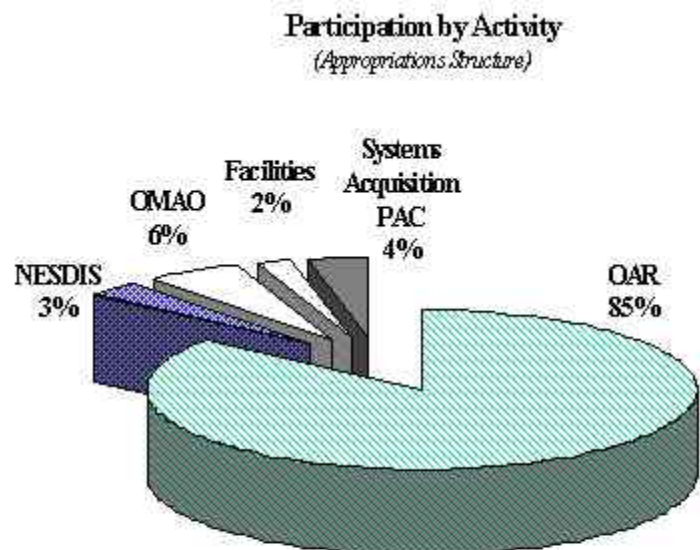


Predict and Assess Decadal to Centennial Climate Change

Total Request: \$101,584,000

Vision - NOAA and its research partners will provide science-based information for improving the predictive understanding and impacts of decadal-to-centennial changes in the global environment, specifically for: long-term climate change and greenhouse warming, ozone layer depletion, and air quality improvement.

Challenge - Our planet is a place of natural and human-induced change. Human activities are now recognized as impacting the global heat balance and climate system, thinning of the stratospheric ozone layer, and atmospheric pollution. While these changes increasingly promise to impact our



societal systems and natural environments, they challenge the world scientific community to improve its prediction and assessment capabilities. Explanatory environmental models must be strengthened through better understanding of the atmospheric and oceanic processes so that we may meet the challenges of understanding and foreseeing climate variability and long-term change in approaching decades. Sound economic and social decisions depend upon assessed scientific information as a touchstone.

Implementation Strategy - The objectives of this goal are:

- to characterize the agents and processes that force decadal to centennial climate change;
- understand the role of the ocean as a reservoir of both heat and carbon dioxide to address a major source of uncertainty in climate models;
- ensure a long-term climate record by enhancing domestic and international weather networks, observing procedures, and information management systems. Document present and past changes and variations in the climate system, including extreme events, and rapid climate changes, exploiting national and international observing networks, satellites, and paleoclimatic data;
- guide the rehabilitation of the ozone layer by providing the scientific basis for policy choices associate with ozone-depleting compounds and their replacements;
- provide the scientific basis for improved air quality by improving the understanding of high surface ozone episodes in rural areas and by strengthening the monitoring network to detect cleaner air quality and improving the characterization of airborne fine particles; and
- develop models for the prediction of long-term climate change (including extreme events and rapid climate changes), carry out scientific assessments, and provide human and biophysical impacts information.

Benefits - Nations have committed to eliminating production of compounds that deplete the ozone layer. Research is not only helping define "ozone-friendly" replacement compounds and monitoring the atmospheric decline in ozone-depleting substances, but also documenting that the recovery of the ozone layer is as expected. Anticipatory research on global climate change supports sustainable development by providing timely information to society to make sound decisions about the role of human activities in global climate change and variability. NOAA research has identified areas of air quality changes, such as high surface ozone in rural areas, that require the development of a fundamental understanding of their causes. New research is pointing to more effective ways to meet those goals, thereby avoiding costly over-regulation. Providing research results that address key scientific uncertainties, presenting the improvements in understanding in up-to-date assessments, and summarizing this knowledge in policy-relevant terms to government and industrial leaders are the cornerstones of environmental stewardship.

FY 2000 Accomplishments

NOAA has recognized that a sustained, multi-dimensional program of research is required to understand and monitor the long-term processes and status of the Earth's atmosphere. On-going research involves monitoring and understanding natural and anthropogenic aerosols and greenhouse gases, stratospheric ozone depletion, background atmospheric constituent composition, and reconstructing past climates through the use of historical measurements and paleoclimate data. In FY 2000, NOAA's research documented trends in atmospheric trace gases related to climate, air quality, and the ozone layer (e.g., methane, halocarbons, nitrous oxide, ozone), and analyzed trends in climate-related parameters such as the frequency of heat extremes. The climate-related properties of atmospheric aerosols were elucidated in studies over ocean and land surfaces. FY 2000 research also advanced understanding of the role of the oceans and land surface in the atmosphere's carbon cycle, information that is key to improved model predictions of future climate. A major study of the chemical processes that influence ozone destruction in high latitudes of the northern hemisphere was conducted in FY 2000. In collaboration with university, government and international partners, NOAA continues to provide the scientific basis for sound, science-based information supporting decisions relevant to issues regarding decadal to centennial change. In FY 2000, NOAA played leading roles in assessing the understanding of climate and climate change, as well as ozone pollution. These achievements are realized largely through the efforts of the Office of Oceanic and Atmospheric Research, the National Environmental Satellite, Data, and Information Service, and the National Weather Service.

Key FY 2002 Activities

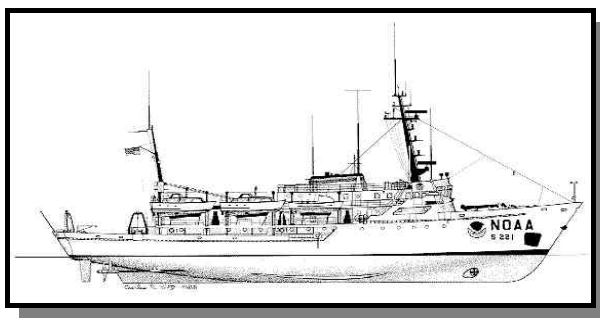
- Continue to advance understanding of the natural and human-influenced processes affecting the earth's radiation balance with an emphasis on observations of the coupled ocean-atmosphere system, especially as it relates to the cycle of carbon dioxide, utilization of observations, and assessments of the current understanding that serve as input to public policy formulation.
- Continue the development of a climate reference network; NOAA will continue to place instruments that measure temperature, precipitation, and soil moisture at a number of reference network sites and to implement a means to electronically communicate all data collected in the reference network.
- Continue improving the ways observations and models are used to study and predict the effects of climate changes on a regional scale within the US.
- Continue the improvement of observation systems and extend the capability of models to develop the ability to predict the effects of natural climate cycles with time scales longer El Nino Southern Oscillation (ENSO).
- Further the understanding of the role of the ocean in the climate system by continuing the deployment of the ARGO float network, ongoing field measurement programs and special targeted studies, and refinement of remote sensing capabilities to better understand the role of the ocean in the climate system.

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- Advance the understanding of the role of natural and human influenced emissions, including aerosols, in altering the radiation balance of the earth by enhancing ongoing monitoring programs and conducting new field measurement programs.
 - Continue the ongoing archival and analysis of climate data to assess current and future impacts and to provide critical data and services to other Federal Agencies, state and local government, private commercial groups, and the public.
 - Continue monitoring the recovery of the stratospheric ozone layer

Key Performance Measures

The scientific community has in place a regular process for evaluating, on a several-year time scale, the major scientific advances in climate science. This process is the periodic assessment of the state of scientific understanding of the climate system. NOAA's measure of performance is that 90% of the research in relevant areas of endeavor be incorporated into these assessments, namely, the vast majority of NOAA's results are deemed by our scientific peers to be major advances in understanding. Three to five years is the period generally used to expect substantial overall advancements in a field such that a new state-of-understanding assessment could be justified. Those products take 2 ½- to 3-years to produce.

Performance Measure	1998 act.	1999 act.	2000 act.	2001 est.	2002 est.
Document the "turnover" of CFC source gases in order to verify the effectiveness of global policy action	N/A	1	N/A	N/A	1
Publish updated trend results of air quality measurements	N/A	1	N/A	1	N/A
Lead development of a peer reviewed initial assessment of regional ozone in North America, including summarizing results for customers	N/A	1	N/A	N/A	N/A
Results of 90% of the research activities cited in the 2001 IPCC third Assessment of Climate Change	N/A	N/A	N/A	90% cited	N/A
Results of 90% of the research activities cited in the 2002 Scientific Assessment of Stratospheric ozone depletion.	N/A	90% cited	N/A	N/A	90% cited
Results of 90% of the research activities cited in the 2000 US National assessment of the Potential Consequences of Climate Variability and Change	N/A	N/A	N/A	90% cited	N/A



The NOAA Ship RAINIER conducts hydrographic surveys used for nautical charting.

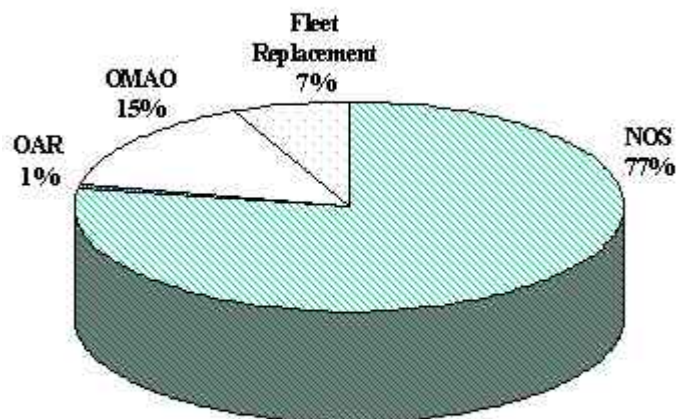
Promote Safe Navigation

Total Request: \$137,069,000

Mission - By 2005, merchant ships, fishing vessels and recreational boats will safely ply our coastal waters, electronically guided by space-based navigation and advanced information technologies. NOAA will revolutionize U.S. marine navigation, mapping and surveying and assist commercial shipping in moving increased cargoes safely and efficiently into and out of the Nation's ports and harbors. NOAA will provide a precise satellite derived reference system as the basis for the Nation's nautical data and geographical positioning needs.

Challenge - Ships have doubled in length, width and draft in the last 50 years and seagoing commerce has tripled, leading to increased risk in the Nation's ports. With 3500 commercial shipping accidents annually, the potential for serious injury to lives, property and the environment is compounded by the fact that over half the cargo transported is oil or hazardous material. The total volume of maritime trade will more than double by the year 2020, posing a significant challenge to the aging infrastructure of the U.S. Marine Transportation System (MTS).

Participation by Activity
(Appropriations Structure)



NOAA's navigation services are a key component of the MTS, but more than 50 percent of NOAA's nautical charting data were obtained before 1940. One-third of the National Shoreline, for which NOAA is responsible, has yet to be mapped. Two-thirds of the data used for tidal predictions are more than 40 years old, and the physical plant of water level measurement stations is in decline. Finally, the existing coordinate reference system must be modernized to provide the higher accuracy and accessibility available from the Global Positioning System (GPS). In recent years, dramatic improvements in efficiency and accuracy have been realized in the technology used to collect data, and NOAA is capitalizing on these technologies and partnerships to address its MTS infrastructure responsibilities.

Implementation Strategy - The objectives of the Promote Safe Navigation goal are to:

- build, maintain, and deliver a digital nautical charting database to underpin new electronic navigation systems which integrate satellite positioning, tidal heights and currents, radar and sonar, and navigational aids;
- update nautical surveys of the Nation's coastal areas using full-bottom coverage technologies;
- define the national shoreline in an accurate and consistent manner using state of the art technology to serve the Nation's navigational and coastal needs;
- provide mariners with real-time observations and forecasts of water levels, tides and currents, and weather conditions in ports; and
- continue to evolve the National Spatial Reference System to anticipate and fulfill the growing demands for more accurate and timely positioning services critical to digital mapping, charting, and surveying.

Benefits - New technology, including full-bottom nautical surveys, digital charting, satellite positioning (GPS) and real-time observations of tides and currents promise to reduce maritime transportation risks, enhance environmental protection and heighten the competitiveness of the U.S. shipping industry. With today's deep-draft container ships, each additional inch of clearance translates into tens of thousands of dollars in additional cargo trade in or out of the United States. Development of real-time environmental and prediction systems will provide important data where users request it. Location, ship dynamics, and precise depth data will alert mariners to potential accidents and will bolster navigational safety and efficiency. In the years ahead, NOAA will continue to streamline its process of collecting and processing data and delivering charts to the maritime community. Particular emphasis will be placed on improving the delivery of electronic formats. By positioning products and processes for the decades ahead, NOAA will continue to ensure that the Nation's maritime commerce remains safe, efficient, competitive, and responsive to customer requirements. NOAA's nautical data will also support the needs of coastal zone planners, regulatory officials and researchers as they work to ensure the safe, sustainable and efficient development of our coastal and ocean resources.

FY 2000 Accomplishments

NOAA's National Ocean Service (NOS) produced 225 new editions of nautical charts and 65 electronic navigational charts (ENC) of major harbor areas; acquired and processed data from 61 in-house hydrographic surveys; accepted 20 contract surveys; and reduced the hydrographic survey backlog to approximately 32,500 square nautical miles. The National Spatial Reference System, which provides the basic positional framework for the Nation's spatial data infrastructure, now has 100% of its Federal Base Network geodetic control stations with 2 centimeter horizontal accuracy (20 stations added), and 65% with better than 5 centimeter accuracy (145 stations added); in addition, 22 more National Continuously Operating Reference Stations (CORS) came on line in FY 2000, providing 86% of the Nation with coverage within 200 km of a single National CORS. As part of the Height Modernization Effort 13 stations in the National CORS network were provided with North American Vertical Datum 1988 (NAVD 88) heights with better than 5 centimeter accuracy. These advances are accomplished primarily through the NOS mapping, charting, geodesy, and observation and prediction subactivities.

Key FY 2002 Activities

- Produce 250 new editions of nautical charts and an additional 65 electronic navigational charts for a total of 200 ENC's.
- Map another 20 percent of the shoreline depiction backlog in the 40 critical high priority ports.
- Reduce the critical hydrographic survey backlog by an additional 3.5 %.
- Integrate NOAA's navigation-related tools through the National Spatial Reference System to deliver more accurate and timely 3-dimensional positioning capability.
- Improve the operational capacity of the 172 National Water Level Observation Network stations and develop real time capabilities in support of Physical Oceanographic Real-Time Systems (PORTS) for navigation and coastal resource management.
- Implement the comprehensive quality assurance capabilities and modernization necessary to support additional PORTS.

Key Performance Measures

	1997 act.	1998 act.	1999 act.	2000 act.	2001 est.	2002 est.
Nautical chart editions (suite of 1000) Lithographic/Alternative Methods ^A	338	360	250	225	250	250
Electronic Navigational Charts (ENC) cumulative ^B	N/A	N/A	37	65	135	200
Reduce critical area survey backlog (43,000 SNM backlog) Cumulative reduction (%) ^C	12	15.5	20.7	24.3	27.9	31.4
National Water Level Observation Network (NWLON) Cumulative % modernized ^D	78	75	91	93	100	100
National Spatial Reference System (NSRS) Cumulative % complete ^E	60	69	58	71	75	80
<p>A. This Performance Measure replaced the Percentage of Chart Suite Printed. The FY2001 target for 200 charts is to have these charts ready for printing if and when requested.</p> <p>B. This performance measure replaces the “Cumulative % of Vector Charts Collected” with “ENC Vector Charts Collected, Maintained and Released (cumulative).”</p> <p>C. A one-time change in accounting caused cumulative reduction in backlog to be adjusted in FY1999 estimates. To improve estimates for contracting, contract miles are now counted when awarded and not when accomplished.</p> <p>D. This performance measure has been revised to “Percent of National Water Level Observation Network modernized”(cumulative). The total number of NWLON stations changed from 175 to 172 in FY 2001.</p> <p>E. The vertical component of the NSRS performance measure was expanded in FY1999 to include additional networks not previously tracked that serve to measure height modernization performance. The target base reference for Continuously Operating Reference Stations increased from 200 to 300 in FY 1999.</p>						

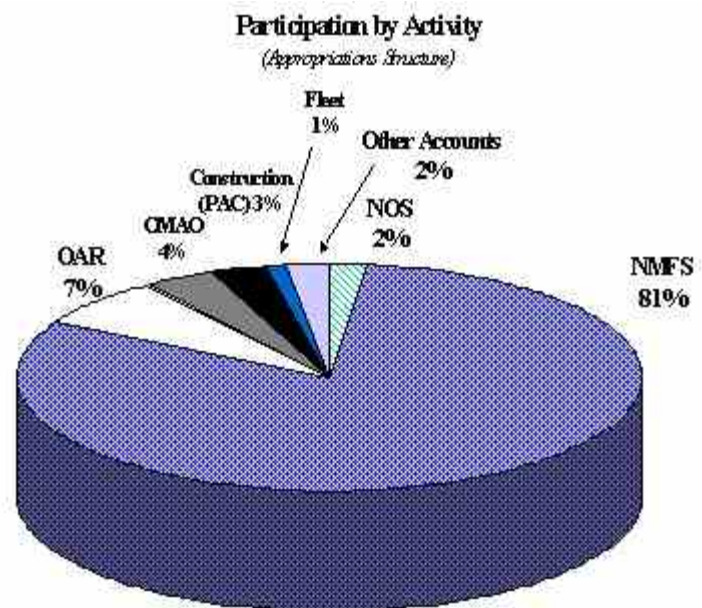


Build Sustainable Fisheries

Total Request: \$533,778,000

Vision - NOAA's vision for the next decade is to greatly increase the Nation's wealth and quality of life through sustainable fisheries that support fishing industry jobs, provide safe and wholesome seafood, and ensure recreational fishing opportunities.

Challenge - Billions of dollars in economic growth, thousands of jobs and countless recreational fishing opportunities are not realized as a result of overfishing and overcapitalization in commercial and recreational fisheries. While many fisheries are well managed and are producing positive benefits, others are severely depleted, and must be restored to realize their long-term potential. Transboundary resources can be especially vulnerable as they require international cooperation to achieve effective conservation and management. Bycatch of non-target species, including juveniles and protected marine species, the controversial allocation decisions among elements of fishing industries, and the degradation and loss of essential fish habitat are serious problems effecting U.S. fisheries. In order to meet the growing domestic and global demand for seafood, and in light of the growing number of wild stocks that are over fished or fully utilized, it is important for the Nation to develop marine aquaculture, and to do so in an environmentally sound manner.



Implementation Strategy - The objectives of this strategic planning goal are to:

- eliminate and prevent overfishing and overcapitalization - by assessing the status of fishery resources, advancing fishery predictions, managing for economic growth in the fishing industry and ensuring adequate and voluntary compliance with fishery regulations;
- attain economic sustainability in fishing communities - by providing research and services for fishery-dependent industries and maximizing benefits from marine resources; and
- develop environmentally and economically sound marine aquaculture - by supporting aquaculture research and development and ensuring responsible industry practices.

Benefits - Rebuilding over exploited fish stocks by eliminating overfishing, protecting and improving fish habitat, and improving the economics of fisheries by reducing overcapitalization, are the key elements in a transition to sustainable fisheries. These activities will result in a more viable and competitive U.S. fishing industry, which in turn will lead to economic and social improvement in fisheries-dependent communities. Along with economic gains and the rebuilding of living marine resources, improved fisheries management and conservation will enhance recreational opportunities and save lives by eliminating the dangerous and wasteful race for the fish. By developing environmentally sound aquaculture, seafood supplies can be supplemented with high quality and reliable products without contributing to overfishing of wild populations or other negative impacts on coastal ecosystems.

FY 2000 Accomplishments

During FY 2000, NOAA continued to provide national leadership to maintain and improve the health of the Nation's fisheries. The following are the year's highlights:

NOAA continues to conduct research to advance fishery predictions, reduce costs of conventional stock assessments, develop advanced remote sensing techniques, improve fishery habitat and promote environmentally sound aquaculture. Through significant regulations (e.g., fish harvesting quotas and closures of fishery areas) NOAA has slowed and/or stopped overutilization of federally managed fisheries. In the future, progress will be focused on rebuilding stocks. Progress was made in defining and identifying possible quantitative methods of measuring fishing capacity. A preliminary report to assess capacity levels in some federally managed fisheries is being completed. These are critical steps in resolving overfishing, and improving the environmental and economic reviews to assist the decision making process.

The American Fisheries Act has been implemented dramatically restructuring of the Alaska pollock fishery. All of the necessary steps were completed in time for the start of the fishing season, resulting in a slower, more profitable harvest.

NOAA Fisheries issued regulations to implement Amendment 8 to the Northern Anchovy Fishery Management Plan (FMP) for the Exclusive Economic Zone (EEZ) off Washington, Oregon, and California. The amendment constitutes a major revamping of the FMP and implements proactive conservation measures by establishing a limited entry program to curtail anticipated increases in harvesting California sardine and Pacific mackerel.

A new monkfish management plan was approved in the Northeast and Mid-Atlantic regions which is intended to stop overfishing and rebuild the monkfish stock. This rule limits capacity, establishes catch

and effort controls, creates a framework adjustment process, and establishes permitting and reporting requirements.

By investing a new state-of-the-art- research vessels, NOAA will be able to conduct essential stock assessment surveys, better monitor fish and marine mammal species, assess ecological changes, and provide the best available data to rebuild sustainable fisheries.

NOAA has completed agreements with all 20 coastal Districts of the Army Corps of Engineers, as well as regional offices of a number of other federal regulatory and construction agencies, to provide efficient ways for agencies to consult with NOAA and minimize adverse effect of their actions on essential fish habitat (EFH). NOAA has conducted over 10,000 EFH consultations resulting in recommendations to help conserve essential fish habitats for commercially and recreationally important species.

NOAA also developed guidelines regarding aquaculture developments and began the process of developing a Code of Conduct for Responsible Marine Aquaculture.

Key FY 2002 Activities

- Improve and expand stock assessments and prediction through increased fish stock surveys, including marine mammal stock assessments.
- Implement the NMFS Stock Assessment Improvement Plan (SAIP). This plan represents an investment in science program infrastructure and key staff resources to ensure state-of-the-art assessments for core species, adequate baseline monitoring of all Federally-managed species, and remedial data collection efforts.
- Investigate basin-wide changes in atmospheric and oceanic circulation and their effects on marine populations. FATE's (Fisheries and the Environment) goal is to develop biological and physical indicators of major changes in the ocean climate regime (i.e., regime shifts) that affects fisheries and other ecosystem components.
- Continue implementation of the national fisheries information system. The proposed system would improve the accuracy and effectiveness of existing data collection programs by establishing common data collection, information technology, and quality standards for regional programs, and integrating the results into a unified Web-enabled information system.
- Initiate new economics and statistics activities in cooperation with recreational and commercial fishing participants, state fishery agencies, interstate commissions, fishery management councils, fishing communities, and regional fisheries network.
- Provide increased observer coverage in previously unobserved fisheries or increase coverage to provide improved statistical validity. This program will improve the quality of data and provide a sound basis for management decision while capitalizing on technology enhancements that will decrease costs and improve efficiency.
- Promote public and private sector aquaculture which includes funding for research to develop environmentally sound marine aquaculture.

Key Performance Measures

	1997 act.	1998 act.	1999 est.	2000 est.	2001*	2002*
% of SFA requirements met	N/A	N/A	20	40	N/A	N/A
% of stocks assessed (of 201 identified)	79	79	79	80	N/A	N/A
% completion of information technology procurement/operations	85	90	95	100	N/A	N/A
# Fishery Management Plans with access controls implemented (of 39 FMPs)	25	23	27	30	N/A	N/A
# of fleets using vessel monitoring systems for spatial/temporal regulations	3	3	5	6	N/A	N/A

* To be replaced by new measures.

Key Performance Measures (New)

	1997	1998	1999 act.	2000 act.	2001 est.	2002 est.
By 2005, 25% (86 of 279) fewer over fished fisheries (stocks subject to overfishing)	N/A	N/A	-4%	-7%	1%	6%
By 2005, 20% fewer overcapitalized fisheries (economic and social aspect)	N/A	N/A	0	1%	3%	3%
By 2005, 60% of stocks have sufficient "essential fish habitat"	N/A	N/A	N/A	10%	40%	40%
By 2005, 9% increase in employment in non-capture fishing and/or other sectors	N/A	N/A	0	1%	2%	2%
By 2005, 20% of communities impacted by limited/closed fisheries are economically improved	N/A	N/A	0	1%	3%	3%
By 2005, 17% increase in economic contribution of aquaculture to Gross Domestic Product (GDP)	N/A	N/A	0	2%	4%	4%
By 2005, 100% of aquaculture operations are in compliance with code of responsible aquaculture practice	N/A	N/A	0	N/A ^A	15%	100%

A. Although several companies applied for permits, there were no aquaculture operations in federal waters in FY 2000.

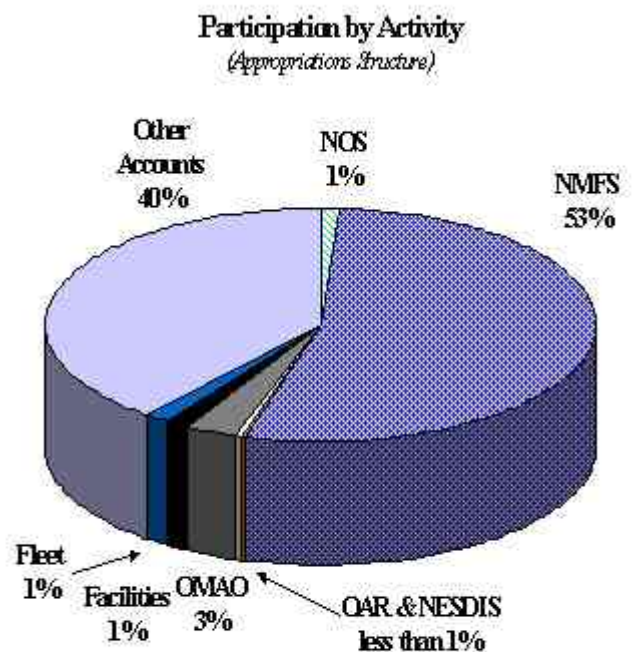


Recover Protected Species

Total Request: \$280,664,000

Vision - NOAA's vision is to conserve marine species and to recover those in danger of extinction. By 2005, NOAA will be on the road to recovering every marine species at risk and maintaining the healthy marine ecosystems upon which they depend.

Challenge - Marine resources contribute billions of dollars to the Nation's economy. However, many commercial and recreational activities contribute to stress on marine species. Many populations of marine organisms are depleted or declining due to human activity in marine ecosystems and unknown causes. For example, West Coast salmon populations are at-risk due to a combination of factors including habitat loss and commercial overexploitation. Despite protective measures, fishing-related mortality continues to threaten marine turtles in the Nation's waters. Several seal and sea lion populations in Alaska are declining rapidly and the causes are uncertain. Recovery plans have been developed for the most endangered species, but implementation for others, especially for stocks of marine mammals and sea turtles, is needed. The desired outcome is to recover protected species in danger of extinction and to maintain healthy species and ecosystems, in a manner compatible with the sustainable use of marine resources.



Implementation Strategy - The objectives of this goal are to:

- reduce the probability of extinction for protected species; and
- maintain healthy species and ecosystems.

Benefits - Through conservation of the Nation's living marine resources, NOAA will enhance economic and cultural opportunities for future generations. The existence of the Marine Mammal Protection Act, the Endangered Species Act and other legislation provides a clear indication of public support for strong efforts to conserve living marine resources. This effort will enable the preservation of marine biodiversity by balancing the utilization of natural resources with the management of protected species. Recovering species, and avoiding the further decline of others, will contribute to the overall health and understanding of marine ecosystems. Improved science will lead to better long-term management and conservation strategies.

FY 2000 Accomplishments

During FY 2000, NOAA continued to improve its stewardship of marine mammals, sea turtles and other marine species, including salmon. NOAA has worked with the International Whaling Commission (IWC) to complete a status assessment for North Atlantic right whales and has also worked to prepare revised estimates of the abundance of dolphin stocks affected by the tuna purse-seine fishery. In order to determine the nesting activities of leatherback turtles, aerial surveys were conducted along the Pacific coast of Mexico.

A recovery plan for endangered fin and sei whales was completed and implemented. In addition, NOAA has worked with its regional offices and other government agencies, such as U.S. Fish and Wildlife Service and the Coast Guard, to develop policies and regulations that protect endangered or threatened species and their habitat. A final rule reducing the mesh size around Turtle Excluder Devices (TEDs) was developed by the northeast regional NMFS office for the summer flounder trawl fishery. Harvest management plans and 4(d) rules have been developed and published for several species of salmon. NOAA's Office of Protected Resources has worked with the U.S. Fish and Wildlife Service to improve the Habitat Conservation Plan (HCP) guidance. Incidental take permits issued under HCP currently cover over 2 million acres of salmon habitat. With the help of the U.S. Coast Guard, NOAA has implemented a mandatory ship reporting system to prevent ship strikes with endangered northern right whales and has instituted regulations on humpback whale-watching activities in Alaska.

During FY 2000, NOAA evaluated and reported on fisheries impacts to marine mammals. NOAA's Observer Program assessed Cook Inlet beluga mortality incidental to the Cook Inlet salmon driftnet fishery, monitored marine mammal takes by the U.S. Navy during low frequency active sonar systems deployments, evaluated the extent to which subsistence harvest of whales is affecting stock recovery, and determined the level of incidental marine mammal take in California gillnet fisheries. NOAA also completed bycatch estimates for North Atlantic sea turtles and published a paper on mitigation of seabird bycatch in relation to the Hawaii-based swordfish longline fishery.

NOAA completed several activities to protect and restore priority diversity areas. Marine debris was removed from coral reefs at Lisianski Island, Northwestern Hawaiian Islands. Creek restoration projects, installation of fish passages and screens on power plants, and the development of analytical recovery models have all been implemented by NOAA to reduce salmonid mortality on the west coast. Species-habitat baseline surveys were conducted in the Tortugas region of Florida to assess the role of coral reef Essential Fish Habitat (EFH) in juvenile and adult reef fish abundance.

Other FY 2000 accomplishments for NOAA's RPS strategic planning team include the institutionalization and enforcement of the Community Oriented Policing and Problem Solving (COPPS) program, which has helped to reduce the number and risk of incidental and direct takes of marine mammals, and has enhanced communication and coordination with tribal groups over subsistence harvest of whales. The International Dolphin Conservation Program Act and the Cooperative Agreement component of the Northern Fur Seal Conservation Plan were both implemented in FY 2000. NOAA represented the U.S. position at the 11th Conference of the Convention on International Trade in Endangered Species (CITES). NOAA also designated critical habitat for numerous stocks of salmon, provided technical assistance to non-federal land managers to develop HCPs, and implemented the Timber/Fish/Wildlife Agreement in Washington. In addition, NOAA reduced the competition between the Alaskan pollock fishery and Stellar sea lions.

FY 2002 Key Activities

The RPS program proposes to restore and sustain the stream of economic, scientific and environmental benefits from the oceans to the American public, as well as other nations. This will be accomplished by focusing on the conservation and recovery of several key marine and anadromous species that serve as indicators of environmental health as well as supporting key economic activities (fisheries and recreation). They are a call for NOAA to act using its scientific and management expertise in cooperation with domestic and international partners.

This initiative focuses NOAA's effort on both the crisis of several species that are on the brink of extinction, and for which we must urgently stem the declines and begin recovery, and on the continued conservation of species that are determined to be at risk or even healthy, but which are threatened by various human activities. The initiative targets species across the marine oceanscape both domestically and internationally. This will be done through a combination of research, monitoring and management actions to determine the causes for the decline and to implement recovery measures.

. Key activities and initiatives include:

Conservation and Recovery of Protected Marine Species

- **Sea turtle conservation and recovery** - Atlantic and Pacific sea turtles are experiencing serious decline and extinction projections within this century. NOAA will gather the information on the

risks these stocks face from fishing operations and other activities, both domestically and internationally, and mitigate those risks as well as monitor trends in species status. These activities are vital to promote marine turtle recovery and avoid restrictions to economic activities that are impacting them.

- **Bottlenose dolphin conservation and recovery** - NOAA will expand current activities in stock identification and assessment, to reduce mortality incidental to commercial fishing activities, and to initiate efforts to use bottlenose dolphins as an indicator of the health of the ecosystems they occupy.
- **Northern right whales** - NOAA will expand current population, monitoring and health assessments and recovery efforts in the North Atlantic and in the North Pacific.
- **Atlantic Salmon Recovery** - The Gulf of Maine Atlantic salmon was listed as endangered in 2000. Once ranging from the Housatonic River in Connecticut to the Canadian border, naturally spawning populations are now restricted to fewer than 20 streams in mid-coast and Downeast Maine area. NOAA will conserve and restore healthy populations of Atlantic and the habitats upon which they depend to provide a surplus for recreational and native people's fisheries consistent with existing laws.
- **Enforcement of conservation measures for protected resources** - NOAA will support two permanent Protected Resources Enforcement Team to enforce Turtle Excluder Device regulations, to educate shrimpers on the maintenance and use of the devices, and to provide additional related problem solving and intervention strategies to protect sea turtles.
- **Pacific salmon recovery** - Pacific salmonids, which have long been integral to the culture and economy of the Pacific Northwest, have declined dramatically over the past century due to the combined effects of habitat destruction; hydropower operations; poor land-use, transportation and water-resource decisions; harvest and hatchery impacts; increased predators; and poor environmental conditions. NOAA will implement the Pacific Coastal Salmon Recovery Fund provide support to the broad array of state, tribal, local governments and private entities that are involved in collaborative salmon conservation efforts in this vast area.
- **Marine Protected Areas Program** - NOAA will strengthen and improve agency-wide Marine Protected Areas (MPA) programs and their conservation goals. NOAA will foster collaboration with the Department of Interior and other Federal agencies, state, local, tribal, and territorial governments as well as non-governmental partners.

Key Performance Measures

	1997 act.	1998 act.	1999 act.	2000 act.	2001 est.	2002 est.
By FY 2006, reduce the probability of extinction of 5 threatened species ¹ /ESUs out of 23 threatened species/ESUs: (annual)	na	na	na	na	2	2
By FY 2006, reduce the probability of extinction of 7 candidate species ¹ /ESUs out of 23 candidate species/ESUs: (annual)	na	na	na	na	1	2
By FY 2006 mortality of strategic marine mammal stocks incidental to commercial fishing operations in six fisheries will be at insignificant levels (cumulative)	na	na	na	na	2	6
# recovery plans developed (cum)	10	20	24	27	27	29
# recovery plan priority activities implemented (annual)	8	8	15	20	22	25
# species with population status improved (annual)	12	23	15	16	17	20
# status reviews used to establish and evaluate conservation programs (annual)	11	18	11	13	15	17
# investigation on mortality of protected species (annual)	7	10	10	15	16	20
# cooperative conservation programs implemented (cum)	4	10	10	10	10	10

The RPS budget proposal is based in part on measuring our ability to reduce the probability of extinction for at risk-species. RPS performance will be measured by the results of our attempts to reduce the risk of extinction for protected species from detrimental human activities, e.g., reducing incidental and direct takes, increasing species habitat, decreasing negative interactions, and mitigating natural phenomena.



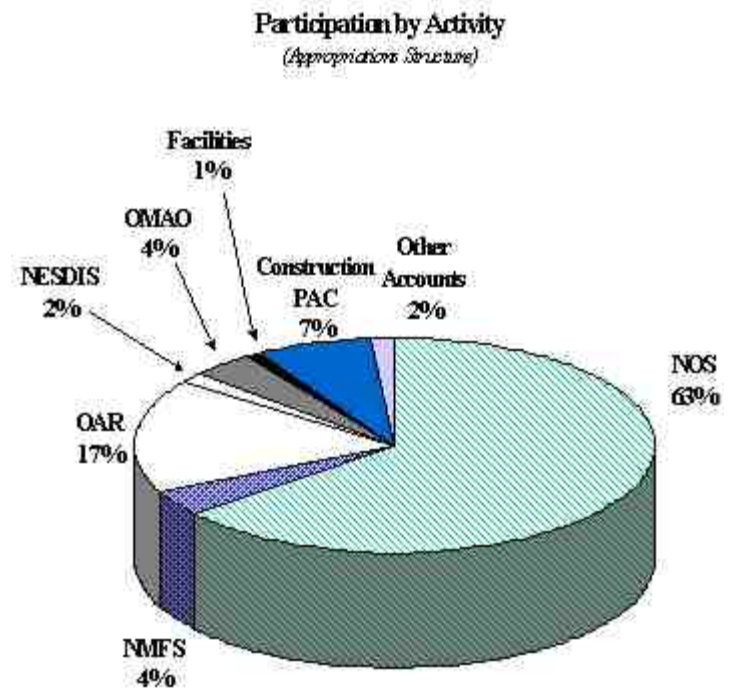
Fagatele Bay National Marine Sanctuary

Sustain Healthy Coasts

Total Request: \$390,046,000

Vision - By 2005, the Nation's coasts will have more productive and diverse habitats for fish and wildlife, and cleaner coastal waters for recreation and the production of seafood. Coastal communities will have thriving, sustainable economies based on well-planned development and healthy coastal ecosystems.

Challenge - Despite progress in developing technology, information and management tools to protect and sustainably use coastal resources, rapid population growth and increasing demands continue to degrade coastal resources and threaten the economic productivity and environmental services of coastal areas. Although these areas comprise only 10 % of U.S. land area, over half of the U.S. population lives on or near the coast, and coastal populations are growing faster than most inland areas. There are many signs that additional efforts are needed to protect the economic and environmental values of U.S. oceans and coasts. In 1998, for example, about one third of 1,062 beaches reporting had at least one advisory or closing, up from 26% in 1997. Polluted runoff and degraded water quality continues to close or restrict the use of nearly 31 % of U.S. shellfish growing waters, and declines in environmental quality continue to threaten coastal communities, businesses, and human health.



Healthy coastal environments support tourism, recreation, fishing and other industries that generate more than \$100 billion annually in coastal communities across the Nation. Coastal wetlands, estuaries, coral reefs and other areas provide essential feeding and nursery habitats for approximately 70 percent of all U.S. commercial and recreational fisheries species. Maintaining the health, productivity and biodiversity of coastal ecosystems is challenging, but essential to sustainable development of coastal economies and the future welfare of the Nation.

Implementation Strategy - The goal of Sustain Healthy Coasts encompasses the following objectives:

- Protect, conserve and restore coastal habitats and their biodiversity.
- Promote clean coastal waters to sustain living marine resources and ensure safe recreation, healthy seafood, and economic vitality.
- Foster well-planned and revitalized coastal communities that sustain coastal economies, are compatible with the natural environment, minimize the risks from nature's hazards, and provide access to coastal resources for the public's use and enjoyment.

Benefits - The pursuit of this goal provides information, technology, solutions, and other valuable tools to coastal resource managers at local, state, tribal and Federal levels. NOAA's coastal activities form an integrated suite of monitoring, research, assessment, restoration, information dissemination and resource management programs that enable sound decision making and sustainable development of coastal areas. Federal-state partnerships such as the Coastal Zone Management Program, National Estuarine Research Reserve System, and National Sea Grant College Program are essential components of the Sustain Healthy Coasts goal. Research provides improved understanding of the way in which coastal ecosystems function, increasing our ability to predict how they respond to changes. The ability to predict change and determine its causes empowers managers and stakeholders to work together to promote sustainable use of coastal resources and mitigate costly damages. NOAA's coastal programs effectively ensure that the Nation's coastal ecosystems are managed for the long-term benefit of the public.

FY 2000 Accomplishments

Maintaining the health, productivity and biodiversity of coastal ecosystems is essential to sustainable coastal economies. It is also critical to the future welfare of the Nation. Through the Sustain Healthy Coasts goal, NOAA addresses the practical needs and concerns of coastal resource managers, provides the science and technology for improving coastal resource management, and helps communities and other partners implement sound and effective ocean and coastal stewardship. These accomplishments are primarily realized through the efforts of the National Ocean Service, the National Marine Fisheries Service, the National Environmental Satellite, Data and Information Service, and the Office of Oceanic and Atmospheric Research. Accomplishments in FY 2000 include:

- NOAA responded to calls for scientific assistance on more than 122 incidents and spills of toxic materials into the Nation's coastal waters. NOAA's Hazardous Materials and Disaster Response teams provided on-site scientific support to other Federal and state agencies, and NOAA's Damage Assessment and Restoration Program evaluated and screened spills to determine whether to initiate damage assessment activities.

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- NOAA and other natural resource trustees removed vessel structures of nine fishing vessels that grounded on the coral reefs of Pago Pago Harbor, American Samoa in 1991. The restoration completely removed the vessels and associated debris to allow natural recovery of about 30,000 square feet of submerged bottom that has been under the grounded vessels.
 - In FY 2000, NOAA resolved 6 cases to recover funds for restoration of coastal resources injured by releases of oil or other hazardous materials. This included a significant settlement for the 1996 *North Cape* oil spill off the coast of Rhode Island, wherein 1.24 million lobsters will be restocked and \$8 million will be provided to restore other natural resources, as well as \$1.2 million for the September 1996 spill of approximately 200,000 gallons of oil into the Fore River when the M/T *Julie N* collided with a bridge near Portland, Maine.
 - NOAA has given full approval to three state Coastal Nonpoint Pollution Control Program: Maryland, Rhode Island and California. This accomplishment supports NOAA's implementation of the Clean Water Action Plan.
 - NOAA supported dozens of projects and partnerships to restore damaged coastal habitats. For example, the Delta Wide Crevasse project constructed 17 new artificial crevasses to foster and create 2,400 acres of natural wetlands along the Mississippi River. In Louisiana, the Lake Chapeau restoration project created 160 acres of wetlands by placing sediments dredged from Atchafalaya Bay into the fragmented marshes. NOAA also commenced construction of three habitat restoration projects in Commencement Bay, WA to benefit commercial and recreational fish species found in Puget Sound.
 - NOAA established the Coastal Data Development Center at Bay St. Louis, Mississippi. The NCDDC will be a National Center that provides for archive of, and access to, the long-term coastal data record. NCDDC will work closely with many of the Federal/state/local agencies, academic institutions, and the private sector to create a unified, long-term archive for coastal data sets.

The health of our Nation's coasts depends on protecting and restoring marine habitats, improving coastal water quality, and building sustainable coastal communities. NOAA provides the science, information, technology, management and training to make progress on these objectives. The SHC performance measures and accomplishments help illustrate NOAA's progress, but they also show the work that still needs to be done. For more information about NOAA's performance in sustaining healthy coasts, please see the Appendix.

Key FY 2002 Activities

While significant progress has been made, water pollution continues to be the number one threat to healthy coastal ecosystems. Reducing runoff pollution and addressing new classes of contaminants that may degrade living marine resources and threaten human health are major concerns that will extend into the new century.

Because harmful algal blooms are increasing in frequency and duration and have been linked to approximately \$1 billion in losses in the past two decades, predicting and reducing hypoxia and harmful algal blooms will be another priority in the 21st century. In addition, preventing and controlling introductions of invasive alien species will be essential to protect the fisheries and other native species that support coastal communities and economies.

Additional priorities will include reducing the effects of natural hazards; conserving and sustaining coral reefs, and exploring the ocean frontier. The new century will bring us face-to-face with growing concerns about food, security, energy, and environmental and economic health. Solutions to many of these concerns may be found in the ocean—and most of it has yet to be explored.

In FY 2002, funding will be invested in increasing the productivity and diversity of fish and wildlife habitats, providing clean coastal waters, initiating a program to reduce the impacts of coastal storms, and expanding our exploration of the ocean world.

Enhance NMS Support, Research and Exploration

New funding for the National Marine Sanctuary System (NMSS) will improve and enhance the operating and technical capacity in the thirteen national marine sanctuaries, improving protection of important sanctuary resources, including coral reefs, endangered marine mammals, sensitive habitats, and significant cultural resources.

Implementation of management changes identified through the revisions of sanctuary specific management plans will begin. These management changes are expected to be in a wide range of activities ranging from drafting and implementing new regulations, establishing new partnerships, additional outreach and education efforts, resources inventories, and additional research, monitoring and restoration.

Enhancement of the Thunder Bay sanctuary will be a major effort in FY 2002. Sustainable Seas Expeditions (SSE) explore and conduct research in deep water habitats in NOAA's National Marine Sanctuaries. Funds will be used to purchase charter ship time and NOAA in-house vessel days-at-sea in support of basic Sanctuary research and monitoring efforts, as well as the Sustainable Seas Expeditions vessel requirements.

Restoration

New funding will strengthen the capabilities of NOAA and its partners to protect and restore coastal resources under the Oil Pollution Act and CERCLA (Superfund), and improve NOAA's prevention and response capabilities. Investments will increase our understanding of the effects of spill response measures, facilitating the development of improved methods and approaches for faster recovery of the injured resources

NOAA will also expand efforts to protect coastal resources from damage caused by releases of oil and other hazardous materials. Enhanced efforts will be undertaken at Superfund sites, industrial facilities, Federal facilities, brownfields, and state-lead sites, resulting in greater protection and restoration of coastal habitats and species.

Estuary Act Monitoring

The Estuary Restoration Act of 2000, passed in November 2000, establishing a new direction for coastal habitat restoration projects in the U.S. and its territories. New funding will support agency activities mandated by the legislation, including the development of scientifically sound monitoring protocols and standards for coastal habitat restoration projects throughout the United States and its protectorates. NOAA will develop restoration databases that provide quick and easy access to information on all projects funded under the Estuary Restoration Act of 2000, as well as other projects that meet specified standards for monitoring and data collection.

SHC Habitat

New funding will enable continued assistance to coastal states in the development, implementation and improvement of state and territorial coastal management programs and National Estuarine Research Reserves. The increase will allow NOAA to address the increasing requests of 33 states for support and technical assistance. It will also maintain support for and synthesize information generated by the 25 existing and 2 proposed National Estuarine Research Reserves.

New funding will enhance the monitoring and training programs at designated National Estuarine Reserve Reserves, and ultimately lead to healthier estuaries, coastal water quality, and fisheries. NOAA and state reserve staff will continue to enhance and build the System-Wide Monitoring Program (SWMP). These funding increases will enable the NERRS to expand its water quality monitoring within certain estuaries to gain a more complete understanding of spatial variation in estuarine conditions. The NERRS coastal training programs will focus on water quality, habitat, invasive species, and sustainable ecosystem issues.

Adaptive Habitat Characterization (improved methods): NOAA will lead development and implementation of advanced capabilities and specialized services to meet NOAA mission requirements for improved mapping and spatial analysis products that characterize the structure and function of coastal habitats.

Coastal Storms

NOAA will initiate efforts to integrate its capabilities to predict and reduce the watershed impacts of coastal storms. New funding will allow NOAA to survey the first Coastal Storms Initiative pilot region in Florida and acquire up-to-date shallow water bathymetry for use in topographic-bathymetric projects. Funding will also support estuarine, coastal and lake modeling and forecasting. These funds will allow for the development of a hydrodynamic model for the St. John's River, Florida. This component complements Coastal Storms increases requested under the Promote Safe Navigation goal.

Coral Reef Monitoring

To support coral reef monitoring, NOAA will continue to build on existing programs that identify potentially harmful naturally occurring events, such as bleaching. Improved remote sensing products and data from in-situ monitoring devices will be more accessible through improved computing power and Internet capabilities to users worldwide. International, inter-agency and cross LO collaborations will continue to develop to more effectively monitor coral reefs in crisis.

Ocean Exploration

As part of the Ocean Exploration initiative, frontier expeditions are planned for the Northeastern Pacific, the Arctic, the Gulf of Mexico and the Hudson Canyon. Proposed actions include: finding new resources in the U.S. EEZ and continental margins, exploring natural sounds through ocean acoustics, exploring America's maritime heritage and technologies to support exploration.

Invasive Species

In support of the National Invasive Species Act, NOAA will continue to address aquatic nuisance species issues in marine and coastal areas. Solutions will be sought to eradicate invasive species from commercial carriers that transport these exotics either in their ballast water or in the infested sediment remaining in their empty ballast tanks.

Creating Value from the Sea

As part of the National Sea Grant College Program Act, NOAA will carry out its mandate to increase the development, utilization and conservation of the Nation's ocean, coastal and Great Lakes resources. Under this mandate NOAA will create value from the sea by advancing our understanding of marine organisms in order to identify and develop products and study processes which have the potential to improve human health as well as address some marine environmental issues.

Key Performance Measures

	1997 act.	1998 act.	1999 act.	2000 act.	2001 est.	2002 est.
Protection/Restoration of coastal habitats (cum):						
# Acres benefitted			81,000	115,000	119,000	122,000
# Damage cases settled	26	30	37	41	45	
# Interagency restoration projects	16	20	25	30	55	
# Coastal regions with adequate measures to prevent and control aquatic invasive species (Total 6 U.S. regions)				1	2	2
Completion of Coastal protection systems						
% State Coastal Nonpoint Pollution Programs	74	83	83	86	89	89
conditionally approved (% of 35 states)	0	0	0.3	0.6	2.2	2.2
% Coastal watersheds with coastal zone management measures to reduce polluted runoff (% of 1920 total watersheds)	89	91	94	94	97	97
% State Coastal Zone Management Programs	10	10	20	31	45	69
completed (% of 35 States)						
% National Estuarine Research Reserves with upgraded capabilities	8	17	25	33	50	69
% National Marine Sanctuaries at baseline operational level						
% of 40 Key U.S. Coastal Ecosystems with:						
Reduced risks from hazardous chemicals	15	20	32	37	42	52
Assessments of water quality and natural resources	23	25	28	30	33	33
Assessment of levels and effects of toxic contaminations	20	25	28	30	32	32

Major NOAA Acronyms

AOML	Atlantic Oceanographic Meteorological Laboratory
ASOS	Automated Surface Observing Systems
<i>ASTWF</i>	<i>Advance Short-term Warnings and Forecasts</i>
ATBs	Adjustments-To-Base
<i>BSF</i>	<i>Build Sustainable Fisheries</i>
CAMS	Commerce Administrative Management System
CS	Corporate Services
CLASS	Comprehensive Large-Array data Stewardship System
CORS	Continuously Operating Reference Stations
CSC	Coastal Services Center
CZMA	Coastal Zone Management Act
EFH	Essential Fisheries Habitat
ENCs	Electronic Navigation Charts
ENSO	El Niño Southern Oscillation
EEZ	Exclusive Economic Zone
GFDL	Geophysical Fluid Dynamics Laboratory
GPS	Global Positioning System
GOES	Geostationary Operational Environmental Satellites
HPCC	High Performance Computing and Communications
IPCC	Intergovernmental Panel on Climate Change
<i>ISI</i>	<i>Implement Season to Interannual Climate Forecasts</i>
MPA	Marine Protected Area
MTS	Marine Transportation System (Initiative)
NCEP EMC	National Center for Environmental Prediction - Environmental Modeling Center
NERRS	National Estuarine Research Reserve System
NESDIS	National Environmental Satellite, Data, and Information Service
NMFS	National Marine Fisheries Service
NMS	National Marine Sanctuaries
NOS	National Ocean Service
NPOESS	National Polar Orbiting Environmental Satellite System
NSRS	National Spatial Reference System
NWS	National Weather Service
NWSTG	National Weather Service Telecommunications Gateway
OAR	Oceanic and Atmospheric Research
OFA	Office of Finance and Administration
OMAO	Office of Marine and Aircraft Operations

Bold
Italics

Line Offices
Strategic Plan Goals

ORF Account	Operations, Research and Facilities Account
PAC Account	Procurement, Acquisition and Construction Account
PS	Program Support
<i>PADCC</i>	<i>Predict and Assess Decadal to Centennial Change</i>
PMEL	Pacific Marine Environmental Laboratory
POES	Polar-Orbiting Operational Environmental Satellite
<i>PSN</i>	<i>Promote Safe Navigation</i>
<i>RPS</i>	<i>Recover Protected Species</i>
<i>SHC</i>	<i>Sustain Healthy Coasts</i>
SWMP	System-Wide Monitoring Program
UNOLS	University-National Oceanographic Laboratory System
USGCRP	United States Global Changes Research Program
USWRP	United States Weather Research Program
VMS	Vessel Management System
WFO	Weather Forecasting Office

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Italics

Line Offices
Strategic Plan Goals

Summary by Activity
Operations, Research, and Facilities (ORF) with Outyears
(Dollar amounts in thousands)

	FY 2000 Enacted	FY 2001 Revised Enacted	Increase/ Decrease	FY 2002 Request
Traditional Budget Structure:				
Operations, Research and Facilities (ORF)				
National Ocean Service	272,863	390,141	117,278	364,486
National Marine Fisheries Service	416,545	634,055	217,510	598,036
Oceanic and Atmospheric Research	297,617	327,470	29,853	330,188
National Weather Service	601,393	629,404	28,011	658,456
National Environmental Satellite, Data and Program Support	109,266	124,959	15,693	131,662
Facilities	62,297	92,859	30,562	164,480
Fleet Maintenance and Planning (Included)	10,981	11,211	230	18,001
Y2K Funding	12,905	0	(12,905)	0
Rent Saving to finance Goddard	0	0	0	0
Offset for Fee Collection	0	0	0	0
Mandatory Payments for NOAA Corps Retiree	14,400	0	(14,400)	0
Subtotal ORF Programs	1,798,267	2,210,099	411,832	2,265,309
Recoveries from prior years/other	(42,652)	(30,984)	11,668	(17,000)
Total Budget Authority (ORF)	1,755,615	2,179,115	423,500	2,248,309
Transfers/Mandatory Funding	(82,400)	(88,000)	(5,600)	(71,000)
Appropriation (general fund - net) - ORF	1,673,215	2,091,115	417,900	2,177,309
Less Rescission of Unavailable Balance	0	0	0	0
Less Navigation & Fisheries Fees Offset (for l:	0	0	0	0
FY 2000 Supplemental Appropriation	57,700	0	(57,700)	0
CJS Appropriation - ORF	1,730,915	2,091,115	360,200	2,177,309
Coastal Ocean Activities (COA)	0	(165,500)	(165,500)	0
Net CJS Appropriation - ORF	1,730,915	1,925,615	194,700	2,177,309

Summary by Appropriation for FY 2002
(Dollars in thousands)

FEDERAL FUNDS:

Appropriation:

	2000	2001	2002 Estimate	Increase/ Decrease
Operations, Research, and Facilities (ORF)	1,730,916	1,925,615	2,177,309	251,694
Procurement, Acquisition, and Construction (PAC)	592,866	681,246	764,861	83,615
Coastal Ocean Activities (COA)	0	420,000	0	(420,000)
Coastal Zone Management Fund	3,999			
Fishermen's Contingency Fund	78	950	952	2
Foreign Fishing Observer Fund	71	191	191	0
Fisheries Promotional Fund	(1,223)	0	0	0
Federal Ship Financing Fund	700	0	0	0
North Pacific Marine Research Institute Fund	5,000			
Pacific Coastal Salmon Recovery Account	58,000	73,759	110,000	36,241
CZM Coastal Impact Assistance Fund	0	(330)	0	330
Fisheries Finance, Program	340	1,285	287	(998)
TOTAL APPROPRIATION	2,390,747	3,102,716	3,053,600	(49,116)

Coastal Zone Management Fund

Discretionary spending authority from collections	0	0	0	0
CZMF Mandatory Offsetting Collections	(4,865)	3,193	(3,000)	(6,193)
CZMF Mandatory Offsetting Collections	(4,865)	3,193	(3,000)	(6,193)

TRANSFERS

Operations, Research, & Facilities

FROM: Promote & Develop Fishery Products	68,000	68,000	68,000	0
Disaster Research and Prevention (USDA)	0	0	0	0
Damage Assessment & Restoration Revolving	0	0	0	0
Coastal Zone Management Fund	167 0	0	3,000	3,000

Transfer from USDA	0	20,000	0	(20,000)
Agency for International Development	0	0	0	0
TO: General Administration	0	0	0	0
Subtotal, ORF	68,000	88,000	71,000	(17,000)

Promote & Develop Fishery Products (P&D)

TO: ORF	(68,000)	(68,000)	(68,000)	0
FROM: Department of Agriculture	69,921	72,828	72,828	0
Subtotal, P&D	1,921	4,828	4,828	0

Damage Assessment & Restoration Revolving Fund (DARRF)

TO: ORF	130	0	0	0
FROM: Department of Interior				
Subtotal, DARRF	130	0	0	0

Environmental Improvement and Restoration Fund

TO: ORF	0	2,108	10,435	8,327
FROM: Department of Interior				
Subtotal, EIRF	0	2,108	10,435	8,327

TOTAL, TRANSFERS

70,051	94,936	86,263	(8,673)
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NOAA Corps Retirement

14,400	15,400	15,400	0
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TOTAL BUDGET AUTHORITY (All funds)

2,470,333	3,216,245	3,152,263	(63,982)
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Less Mandatory Promote & Develop Funds - USDA Transfer

(69,921)	(72,828)	(72,828)	0
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Offset Mandatory CZM Collection Funds

4,865	0	3,000	3,000
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NOAA Corps Retirement

(14,400)	(15,400)	(15,400)	0
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DARRF

(130)	0	0	0
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Federal Ship Financing Fund

(700)	0	0	0
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Environmental Improvement and Restoration Fund

0	(2,108)	(10,435)	
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Fisheries Finance Program Account (Mandatory)

0	0		
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DISCRETIONARY BUDGET AUTHORITY	2,390,047	3,125,909	3,056,600	(60,982)
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Summary by Activity
Procurement, Acquisition, and Construction (PAC)
(Dollars amounts in thousands)

	FY 2000 Enacted	FY 2001 Enacted	Increase/ Decrease	FY 2002 Request
Systems Acquisition				
HPCC/GFDL Supercomputer	4,981	3,991	(990)	6,984
Comprehensive Large Array Data Stewardship Sys.	0	1,995	1,995	3,626
ASOS	3,840	3,846	6	5,125
AWIPS/NOAA Port	15,939	16,264	325	16,264
Central Computer Upgrade	11,058	15,052	3,994	15,052
Evansville Doppler Radar	0	5,491	5,491	0
NEXRAD	8,249	8,261	12	8,261
NWSTG Backup-CIP	0	0	0	7,460
Radiosonde Replacement Program	6,973	4,989	(1,984)	4,989
GOES I-M	76,789	58,486	(18,303)	13,960
GOES N-Q	188,814	231,698	42,884	277,814
GOES R	0	0	0	1,500
NOAA K-N'	130,481	136,684	6,203	146,288
Polar Convergence	59,772	73,164	13,392	156,564
CAMS	0	19,779	19,779	19,804
<i>SUBTOTAL SYSTEMS ACQUISITION</i>	506,896	579,700	72,804	683,691

Construction

ACE Basin - Construction	0	7,983	7,983	0
ACE Basin - Land Acquisition	0	1,996	1,996	0
Beaufort Lab Repairs	0	0	0	1,000
Coastal Service Center (Wing)	0	0	0	1,000
Folly Beach	0	1,996	1,996	0
Great Bay NERRS, NH	2,500	4,989	2,489	0
Great Bay Partnership	0	2,997	2,993	0

Jacques Cousteau NERRS	750	499	(251)	0
Kachemak Bay NERRS	4,000	4,989	989	0
Kachemak Bay Research Center NERRS		3,991	3,991	0
Marine Sanctuaries	3,000	2,993	(7)	15,993
NERRS Construction (Base)	6,000	6,985	985	9,912
Orange County Land Acquisition	0	1,995	1,995	0
Pribilof Island Cleanup	0	5,987	5,987	0
Raritan, NJ - Land Acquisition	0	998	998	0
San Francisco NERRS	0	2,993	2,993	0
Winyah Bay - Land Acquisition NERRS	0	2,494	2,494	0
Acquatic Resources	0	4,989	4,989	0
Alaska Facilities Fisheries Center - Juneau	747	14,967	14,220	11,700
Botanical Gardens	1,387	3,492	2,105	0
East Kentucky Pride Inc. - Acquatic Res. Environ	0	4,989	4,989	0
East Kentucky Pride Inc. - Design and Construction	0	10,976	10,976	0

Summary by Activity
Procurement, Acquisition, and Construction (PAC)
(Dollars amounts in thousands)

	FY 2000 Enacted	FY 2001 Enacted	Increase/ Decrease	FY 2002 Request
Honolulu	0	0	0	3,000
National Marine Life Center, NJ	0	798	798	0
Sea Life Center	0	9,978	9,978	0
Sea Life Center	5,084	3,991	(1,093)	0
Alaska Facility Ship Creek	3,235	0	(3,235)	0
Norman Consolidation	0	2,993	2,993	0
University of NH Marine Facilities	0	13,969	13,969	0
NWS WFO Construction	9,490	9,505	15	12,000
Continuity of Critical Facilities for Satellite Operations	0	0	0	4,550
NORC Rehabilitation - (Suitland)	3,033	0	(3,033)	0
Suitland	2,773	14,967	12,194	5,700
<i>SUBTOTAL CONSTRUCTION</i>	41,999	149,495	107,496	64,855

Fleet Replacement

Fisheries Research Vessel	51,371	8,282	(43,089)	0
ADVENTUROUS Refurbishment	0	7,982	7,982	4,200
ALBATROSS IV	0	0	0	4,000
FAIRWEATHER Refurbishment	0	6,785	6,785	9,515
GORDON GUNTER	0	0	0	1,800
Naval Surplus Vessels for Coastal Research	0	4,989	4,989	0
<i>SUBTOTAL FLEET REPLACEMENT</i>	51,371	28,038	(23,333)	19,515

<i>TOTAL OBLIGATIONS</i>	600,266	757,233	156,967	768,061
<i>FINANCING</i>	(7,400)	(7,487)	(3,400)	(3,200)
<i>TOTAL Discretionary Budget Authority</i>	592,866	749,746	153,567	764,861

Summary of Other Accounts
(Dollar amounts in thousands)

	FY 2000 Enacted	FY 2001 Enacted	Increase/ Decrease	FY 2002 Request
Traditional Budget Structure:				
Other Accounts				
Fishermen's Contingency Fund	78	950	872	952
Foreign Fishing Observer Fund	71	191	120	191
Fisheries Promotional Fund	(1,223)	0	1,223	0
Federal Ship Financing Fund	700	0	(700)	0
Fisheries Financing Program	340	287	(53)	287
Pacific Coastal Salmon Fund	58,000	109,758	51,758	110,000
Fisheries Assistance Fund	0	0	0	0
Coastal Impact Assistance Fund	0	149,670	149,670	0
Environmental Improvement and Restor:	0	2,108	2,108	10,435
Promote and Develop Fisheries	0	0	0	0
Transfer to ORF	(68,000)	(68,000)	0	(68,000)
Transfer from Department of Agriculture	69,921	72,828	2,907	72,828
Total Obligations, P&D	1,921	4,828	2,907	4,828
Unobligated balance, start of year	0	0	0	0
Unobligated balance, end of year	0	0	0	0
Subtotal Budget Authority	1,921	4,828	2,907	4,828
Transfer to ORF	68,000	68,000	0	68,000
Transfers from Department of Agriculture ((69,921)	(72,828)	(2,907)	(72,828)
Total Appropriation, P&D	0	0	0	0
Damage Assessment & Rest. Revolving Fund				
Transfer to ORF, Unobligated Balance	0	0	0	0
Transfer to ORF	0	0	0	0
Offsetting Collections	1,500	0	(1,500)	0
Transfer from Interior, Unobligated Bala	0	0	0	0
Transfer from Interior	0	0	0	0
Total Obligations, DARRF	1,500	0	(1,500)	0
Unobligated balance, start of year	0	0	0	0
Unobligated balance, end of year	0	0	0	0
Financing from Offsetting Collections	(1,500)	0	1,500	0
Subtotal Budget Authority	0	0	0	0

Transfer to ORF	0	0	0	0
Transfer from Interior	0	0	0	0
Total Appropriation, DARRF	0	0	0	0
Coastal Zone Management Fund (Discretionary)				
Transfer to ORF	0	0	0	0
Mandatory Offsetting Collection	4,865	3,193	(1,672)	(3,000)
B.A., Gross (Discretionary)	4,865	3,193	(1,672)	(3,000)
Mandatory Offsetting Collections	(4,000)	0	4,000	0
B.A., Net	865	3,193	2,328	(3,000)
Transfer to ORF	4,000	(3,193)	4,000	3,000
Appropriation	4,865	0	6,328	0
TOTAL B.A. OTHER ACCOUNTS	60,752	270,985	210,233	123,693

NOAA PACIFIC SALMON FUNDING
FY 2000-2002
(\$s in millions)

Source of Funds	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Request
NMFS Funding	\$57.2	\$67.3	\$66.4
ESA Recovery Plan	29.9	37.9	37.9
Other/Base Programs	11.9	12.0	12.0
Columbia River Hatcheries and Facilities	15.4	17.4	16.5
Pacific Coastal Salmon Recovery Fund	58.0	90.0	90.0
Alaska	14.0	17.3	17.3
Washington	18.0	31.3	31.3
Oregon	9.0	15.7	15.7
California	9.0	15.7	15.7
Tribes	8.0	10.0	10.0
Pacific Salmon Treaty	17.4	27.4	27.4

NMFS Implementation (ORF)	7.4	7.4	7.4
Northern Fund (NMFS)	0.0	10.0	10.0
Southern Fund (NMFS)	10.0	10.0	10.0
WA State Buyout (State Dept) 1/	<i>[5.0]</i>	<i>[20.0]</i>	<i>[5.0]</i>
Northern Fund (State Dept) 1/	<i>[0.0]</i>	<i>[10.0]</i>	<i>[10.0]</i>
Southern Fund (State Dept) 1/	<i>[10.0]</i>	<i>[10.0]</i>	<i>[10.0]</i>
Total NOAA Salmon Funding	\$132.6	\$184.7	\$183.8

1/ These are State Department funds.
Nonadds are italicized and bracketed.

Reauthorization Required By FY 2002

Several Public Laws covering the budget authority in the FY 2002 budget are being proposed for reauthorization in the First Session of the 107th Congress. These Acts and the requested authorization of appropriations are shown on the chart below:

	(Thousands of Dollars)	
<u>National Oceanic & Atmospheric Administration</u>	2001 Enacted	2002 Request
<u>National Marine Fisheries Service</u> Endangered Species Act P.L. 100-478	\$102,476	\$108,314
<u>National Marine Fisheries Service</u> Marine Mammal Protection Act P.L. 103-238	28,251	30,339
<u>National Marine Fisheries Service</u> Magnuson-Stevens Fisheries Conservation Act, P.L. 104-297	232,844	241,155
<u>National Marine Fisheries Service</u> NOAA Marine Fisheries Program Authorization Act, P.L. 104-297	223,148	207,688
<u>National Marine Fisheries Service</u> Interjurisdictional Fisheries Act, P.L. 104-297	18,150	8,190
<u>National Marine Fisheries Service</u> Anadromous Fishery Conservation & Management Act P.L. 104-297	2,345	2,350

<u>National Oceanic & Atmospheric Administration</u>	2001 Enacted	2002 Request
<u>National Ocean Service</u> Coastal Zone Management Act P.L. 104-150	107,813	97,745
<u>National Ocean Service</u> Coastal Nonpoint Source Program P.L.'s 106-506	9,978	10,000
<u>National Ocean Service</u> Hydrographic Services Improvement Act P.L. 105-383	96,148	106,650
<u>National Environmental, Satellite Data and Information Services</u> Land Remote Sensing Policy Act 15 U.S.C.313	0	<u>1,200</u>
Total	\$821,153	\$813,631

NATIONAL OCEAN SERVICE
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		NAVIGATION SERVICES									
		Mapping and Charting									
	PSN	(Mapping and Charting Base)	230	32,984		79	3,953	0	216	37,016	4,032
F	PSN	(Electronic Navigational Charts)		0				3,554	0	3,554	3,554
F	PSN	(Shoreline Mapping)		1,497			(1,497)	1,000	0	1,000	(497)
	PSN	(Seacoast Science Center)		299	(299)				0		(299)
	SHC	(Seacoast Science Center (COA))		998	(998)				0		(998)
	PSN	(Joint Hydrographic Ctr)		2,574		6		0	0	2,580	6
	PSN	(Coastal Storms)		0				1,000	0	1,000	1,000
		Subtotal Mapping & Charting	230	38,352	(1,297)	85	2,456	5,554	216	45,150	6,798
				0					0		
	PSN	Address Survey Backlog/CONTRACTS		20,405	0	45	0	0	0	20,450	45
				0					0		
				0					0		
		Geodesy									
	PSN	(Geodesy Base)	189	19,591		43	916	0	172	20,550	959
F	PSN	(National Spatial Reference System)		0				500	0	500	500
	PSN	(Height Modernization Study-NGS Implementation)		249		1			0	250	1
	PSN	(Height Modernization Study NC)		998		2			0	1,000	2
	PSN	(Height Modernization Study- CA Spatial Reference Center)		998		2			0	1,000	2
	PSN	(S. Carolina Geodetic Survey)		499		1			0	500	1
		Subtotal Geodesy	189	22,335	0	49	916	500	172	23,800	1,465
				0					0		
				0					0		
		Tide and Current Data									
	PSN	(Tide and Current Data Base)	135	15,056		33	661	0	116	15,750	694
F	PSN	(Coastal Storms)		0				1,000	0	1,000	1,000
F	PSN	(Implement Forecast Models)		0				500	0	500	500
		Subtotal Tide & Current Data	135	15,056	0	33	661	1,500	116	17,250	2,194
				0					0		
		TOTAL NAVIGATION SERVICES	554	96,148	(1,297)	212	4,033	7,554	504	106,650	10,502
		OCEAN RESOURCES CONSERVATION AND ASSESSMENT									
									0		
									0		
									0		
		Estuarine and Coastal Assessment							0		
		Oceanic and Coastal Research							0		
	SHC	(Oceanic and Coastal Research - Base)	59	5,957		21	3,822	0	47	9,800	3,843
	SHC	(Fish Forensics/Enforcement)		1,247			(1,247)		0		(1,247)
	SHC	(Marine Environmental Health Research Lab Op Cost)		1,277			(1,277)		0		(1,277)
	SHC	(Pfiesteria/Toxins Research Charleston Lab) [CWI Base]		998			(998)		0		(998)
		Subtotal Oceanic & Coastal Research	59	9,479	0	21	300	0	47	9,800	321
				0					0		
				0					0		
				0					0		
		Ocean Assessment Program (OAP)									
	SHC	(Ocean Assessment Program - Base)	173	12,630		36	942	0	151	13,608	978
	SHC	(Coastal Storms)		0				1,000	0	1,000	1,000
	SHC	(Beaufort/Oxford)		2,917		6	577	0	0	3,500	583
	SHC	(Pfiesteria and HAB Rapid Response)		3,916		9		0	0	3,925	9
	SHC	(Pfiesteria Research SC Dept of Marine Resources)		499	(499)			0	0	0	(499)
	SHC	(South Florida Ecosystem)		898		2		0	0	900	2
	SHC	(Coop Institute for Coastal and Estuarine Enviro Tech)		5,787		13		0	0	5,800	13
	SHC	(Coastal Services Center)		18,709		41	150	0	0	18,900	191
C	SHC	(Nat'l Coral Reef Institute - Hawaii)		998		2		0	0	1,000	2
C	SHC	(Nat'l Coral Reef Institute - Florida)		499		1		0	0	500	1

NATIONAL OCEAN SERVICE
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
C	SHC	(Nat'l Coral Reef Institute - Puerto Rico)		499		1		0	0	500	1
C	SHC	(Coral Reef Program (COA))		13,969		31		0	0	14,000	31
	SHC	(Louisiana Department of Natural Resources - Marsh Research (COA))		2,993	(2,993)			0	0		(2,993)
	SHC	(Harmful Algae Blooms (COA))		4,989		11		0	0	5,000	11
	SHC	(National Fish and Wildlife Foundation -NFWF)		998		2		0	0	1,000	2
	SHC	(JASON Education and Outreach)		2,494		6		0	0	2,500	6
		Subtotal Ocean Assessment Program (OAP)	173	72,795	(3,492)	161	1,669	1,000	151	72,133	(662)
		Response and Restoration							0		
	SHC	(Response and Restoration - Base)	114	1,712		52	11,004		98	12,768	11,056
	SHC	(Estuarine and Coastal Assessment)		2,668			(2,668)		0	0	(2,668)
	SHC	(Damage Assessment Program)		5,199			(5,199)		0	0	(5,199)
	SHC	(Oil Pollution Act of 1990)		998	0		(998)		0	0	(998)
	SHC	(River Restorations - DuPage Detroit, Lower Rouge (COA))		11,475	(11,475)				0	0	(11,475)
	SHC	(Coastal Protection & Restoration Program)		998			(998)		0	0	(998)
F	SHC	(Spill Response and Habitat Restoration)		0				2,000	0	2,000	2,000
	SHC	(Estuary Restoration Act)		0				2,000	0	2,000	2,000
	SHC	(NH Dept of Environmental Services (COA))		998	(998)				0	0	(998)
		Subtotal Response and Restoration	114	24,048	(12,473)	52	1,141	4,000	98	16,768	(7,280)
		TOTAL ESTUARINE AND COASTAL ASSESSMENT	346	106,322	(15,965)	234	3,110	5,000	296	98,701	(7,621)
		Coastal Ocean Science							0		
		Coastal Ocean Program							0		
	SHC	(Coastal Ocean Program - Base - SHC)	20	611		28	2,385		7	3,024	2,413
	BSF	(Coastal Ocean Program - Base - BSF)		9,866			0		14	9,866	0
	SHC	(ECOHAB)		4,191		9		0	0	4,200	9
	SHC	(Hypoxia)		1,085			(1,085)		0	0	(1,085)
	SHC	(South Carolina Sea Grant Land Use Program)		1,197			(1,197)		0	0	(1,197)
	SHC	(South Florida Ecosystem) in Base		1,297		3		0	0	1,300	3
		Subtotal Coastal Ocean Science	20	18,247	0	40	103	0	21	18,390	143
		TOTAL, OCEAN RESOURCES CONSERVATION & ASSESSMENT	366	124,569	(15,965)	274	3,213	5,000	317	117,091	(7,478)
		OCEAN COASTAL MANAGEMENT							0		
		Coastal Management							0		
C	SHC	CZM Administration *	58	2,794		73	3,029	486	44	6,382	3,588
C	SHC	CZM Grants		60,367		133		8,463	0	68,963	8,596
C	SHC	National Estuarine Research Reserve		14,718		32		1,650	0	16,400	1,682
	SHC	Great Lakes Community Grants		29,934	(29,934)	0		0	0	0	(29,934)
C	SHC	Nonpoint Pollution Control Implementation Grants		9,978		22		0	0	10,000	22
		Subtotal Coastal Management	58	117,791	(29,934)	260	3,029	10,599	44	101,745	(16,046)
		Ocean Management							0		
		Marine Sanctuary Program							0		
C	SHC	(Marine Sanctuary Program - Base)	124	31,930		70	0		81	32,000	70
C	SHC	(Marine Sanctuary Program - Base Enhancement)						2,000	0	2,000	2,000
C	SHC	(Northwest Straits Citizens Advisory Commission)		499	(499)				0	0	(499)
C	SHC	(Sanctuaries/SSE Data Collection)						2,000	0	2,000	2,000
C	RPS	Marine Protected Areas		0				3,000	8	3,000	3,000
		Subtotal Ocean Management	124	32,429	(499)	70	0	7,000	89	39,000	6,571

**NATIONAL OCEAN SERVICE
(\$ IN THOUSANDS)**

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		TOTAL, OCEAN COASTAL MANAGEMENT	182	150,220	(30,433)	330	3,029	17,599	133	140,745	(9,475)
		Acquisition of Data							0		
	PSN	(Acquisition of Data - Base)	222	13,091			(13,091)		0		(13,091)
	SHC	(Acquisition of Data - Base)		5,115			(5,115)		0		(5,115)
	SHC	(NOAA Corp Office Support (COA))		210			(210)		0		(210)
	PSN	(NOAA Corp Office Support (COA))		788			(788)		0		(788)
		Total. Acquisition of Data (Transferred to Program Support in FY 02)	222	19,204			(19,204)		0	0	(19,204)
		TOTAL ORF NOS (FY 00 & 01 Includes Acquisition of Data)	1,324	390,141	(47,695)	816	(8,929)	30,153	954	364,486	(25,655)

FY 2002 Crosscut Initiatives

A	PI	People & Infrastructure
B	MSC	Maintain Satellite Continuity & Server Weather Forecasts
C	CCA	Coastal Conservation Activities
D	CS	Climate Services
E	MNF	Modernization of NOAA Fisheries
F	MTS	Modernization of the Marine Transportation System

NATIONAL MARINE FISHERIES SERVICE
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY 2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		INFORMATION COLLECTION & ANALYSES									
		Resource Information (RI)									
	BSF	(Resource Information Base - BSF)	991	86,256		316	3,853	0	956	90,425	4,169
	RPS	(Resource Information Base - RPS)		0					0	0	0
	SHC	(Resource Information Base - SHC)		0					0	0	0
E	BSF	(Expand Annual Assessments - Data Collection)		1,696		4		13,300	21	15,000	13,304
E	BSF	(Fisheries Oceanography)		0		0		1,500	0	1,500	1,500
E	BSF	(South Florida)		1,297		3		600	0	1,900	603
E	BSF	(Aquaculture)		0				1,000	0	1,000	1,000
E	BSF	(Pacific Highly Migratory Species Research)		0				1,000	0	1,000	1,000
	BSF	(National Warmwater Aquaculture Research Center-Stoneville)		249		1			0	250	1
	BSF	(Mote Marine Lab - Shark Research)		150					0	150	0
	BSF	(Chinook Salmon Research at NMFS Auke Bay Lab)		299		1			0	300	1
	BSF	(Naragansett Bay Cooperative Study)		0					0	0	0
	BSF	(West Coast Groundfish Research)		4,241		9		0	0	4,250	9
	BSF	(MARMAP)		848		2			0	850	2
	BSF	(Gulf of Mexico Consortium)		2,495	(1,000)	5			0	1,500	(995)
	BSF	(Gulf and South Atlantic Foundation)		0					0	0	0
	BSF	(Atlantic Herring and Mackerel)		200					0	200	0
	BSF	(South Carolina Taxonomic Center)		349		1			0	350	1
	BSF	(Aquatic Resources Initiative)		7,983	(7,983)	0		0	0	0	(7,983)
	BSF	(Alaska Near Shore Fisheries)		998	(500)	2		0	0	500	(498)
	BSF	(Chesapeake Bay Oyster Recovery Program)		848		2			0	850	2
	BSF	(Charleston Bump)		299		1			0	300	1
	BSF	(Bluefin Tuna Tagging)		599		1			0	600	1
	BSF	(Shrimp Pathogens)		299		1			0	300	1
	BSF	(Lobster Sampling)		150		0			0	150	0
	BSF	(King Crab & Sea Snails)		200	(200)			0	0	0	(200)
	BSF	(Tri-Coastal Marine Stock Assessment)		998	(998)			0	0	0	(998)
	BSF	(Bering Sea Crab)		998	(500)	2		0	0	500	(498)
	BSF	(Southeastern Sea Turtles)		299		1			0	300	1
	BSF	(Additional Magnuson-Stevens Act Implementation)		748		2			0	750	2
	BSF	(Magnuson Stevens Act Implementation)		6,486		14			0	6,500	14
	BSF	(NEC Cooperative Marine Education/Research/VIMs)		200					0	200	0
	BSF	(Pascagoula MS Lab (COA))		998		2			0	1,000	2
	BSF	(Hawaiian Communities Development Program)		499	(499)		0	0	0	0	(499)
	SHC	(Chesapeake Bay Multi Management - Blue Crab)		0					0	0	0
		Total Resource Information Base	991	120,682	(11,680)	370	3,853	17,400	977	130,625	9,943
	BSF	Antarctic Research	0	1,497		3			0	1,500	3
									0		
									0		
	SHC	Chesapeake Bay Studies							0		
		Base		1,997		3			0	2,000	3
	BSF	(Multi-Species Management - Blue Crab)		499		1			0	500	1
		Subtotal Chesapeake Bay Studies	0	2,496	0	4	0	0	0	2,500	4
									0		
	RPS	Right Whale Research	0	0					0		
									0		
									0		
									0		
		MARFIN							0		
	BSF	(Base)		2,495		5			0	2,500	5
	BSF	(Red Snapper)		748		2			0	750	2
	BSF	(NE Activities)		249		1			0	250	1

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			FTE	Amount					FTE	Amount	
		Subtotal MARFIN	0	3,492	0	8	0	0	0	3,500	8
	BSF	SEAMAP	0	1,397		3			0	1,400	3
		Alaskan Groundfish Surveys							0	0	0
	BSF	(Alaskan Groundfish Survey - Base)		660		1			0	661	1
	BSF	(Calibration Studies)		238	0	1	0		0	239	1
		Subtotal Alaskan Groundfish Surveys	0	898	0	2	0	0	0	900	2
	BSF	Bering Sea Pollock Research	0	943		2			0	945	2
	BSF	West Coast Groundfish	0	818		2			0	820	2
	BSF	New England Stock Depletion	0	998		2			0	1,000	2
	BSF	Hawaiian Stock Management Plan	0	499		1			0	500	1
		Yukon River Chinook Salmon							0	0	0
	BSF	(Base)		998		2			0	1,000	2
	BSF	(Yukon River Drainage Fisheries Association)		499		1			0	500	1
		Subtotal Yukon River Chinook Salmon	0	1,497	0	3	0	0	0	1,500	3
	RPS	Atlantic Salmon Research	0	708		2			0	710	2
	BSF	Gulf of Maine Groundfish Survey	0	566		1			0	567	1
	RPS	Dolphin Yellowfin Tuna Research	0	249		1			0	250	1
		Pacific Salmon Treaty Program							0	0	0
	RPS	(Base)		5,600		12			0	5,612	12
	RPS	(Chinook Salmon Agreement)		1,840		4			0	1,844	4
		Subtotal Pacific Salmon Treaty Program	0	7,440	0	16	0	0	0	7,456	16
	RPS	Hawaiian Monk Seals		798		2			0	800	2
		Red Snapper Monitoring and Research							0	0	0
	RPS	(Red Snapper Monitoring)		4,490		10			0	4,500	10
	RPS	(Red Snapper Monitoring) (COA))		2,994		6			0	3,000	6
		Subtotal Red Snapper Monitoring and Research	0	7,484	0	16	0	0	0	7,500	16
		Cooperative Research							0	0	0
E	RPS	(SE Cooperative Research)		2,495		5		500	0	3,000	505
	BSF	(National Cooperative Research)		2,993		7			0	3,000	7
		Subtotal, Cooperative Research	0	5,488	0	12	0	500	0	6,000	512
		Stellar Sea Lion Recovery Plan							0	0	0
	RPS	(Base)		21,952		48			0	22,000	48
	RPS	(Alaska Sea Life Center)		5,987		13		(3,000)	0	3,000	(2,987)
	RPS	(State of Alaska)		2,495		5			0	2,500	5
	RPS	(Gulf APEX Predator University of Alaska)		998		2			0	1,000	2
	RPS	(North Pacific Universities MM Consortium)		798		2			0	800	2
		Subtotal Stellar Sea Lion Recovery Plan	0	32,230	0	70	0	(3,000)	0	29,300	(2,930)
	RPS	Hawaiian Sea Turtles		299		1			0	300	1

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			FTE	Amount					FTE	Amount	
		Bluefish/Striped Bass							0		
	BSF	(Base)		698		2			0	700	2
	BSF	(Rutgers)		798		2			0	800	2
		Subtotal Bluefish / Striped Bass	0	1,496	0	4	0	0	0	1,500	4
									0		
	BSF	Halibut Sablefish		1,197		3			0	1,200	3
		TOTAL RESOURCE INFORMATION	991	193,172	(11,680)	528	3,853	14,900	977	200,773	7,601
		Fishery Industry Information							0		
		Fish Statistics							0		
E	BSF	(Base)	175	13,151		29	722	0	157	13,902	751
	BSF	(National Standard 8 of the SFA)		998		2			0	1,000	2
	BSF	(Economics Statistics Research)		1,996		4		1,365	0	3,365	1,369
	BSF	(Atlantic States Marine Fisheries Commission - ASMFC)		1,497		3			0	1,500	3
E	BSF	(National Fisheries Information System)		0		0		8,000	0	8,000	8,000
		Subtotal Fish Statistics	175	17,642	0	38	722	9,365	157	27,767	10,125
		Alaska Groundfish Monitoring							0		
	BSF	(Base)		2,082		5			0	2,087	5
	BSF	(Alaska Winter Pollock Survey)		998		2			0	1,000	2
	BSF	(Crab Research)		848		2			0	850	2
	BSF	(Bering Sea Fisherman Association CDQ)		150					0	150	0
	BSF	(State of Alaska - Crab Scallop & Rockfish Research)		0		0			0	0	0
	BSF	(State of Alaska - AFA Crab, Scallops, License Limitation)		1,597	(600)	3		0	0	1,000	(597)
	BSF	(NMFS Rock Fish Research)		349		1			0	350	1
	BSF	(Gulf of Alaska Coastal Communities Coalition)		175		0			0	175	0
	BSF	(NMFS Infield Fishery Monitoring)		299		1			0	300	1
	BSF	(State of Alaska Rockfish Research)		238		0			0	238	0
		Subtotal Alaska Groundfish Monitoring	0	6,736	(600)	14	0	0	0	6,150	(586)
									0		
	BSF	PACFIN/Catch Effort Data		2,993		7			0	3,000	7
	BSF	AKFIN		2,993		7			0	3,000	7
	BSF	GULF FIN Data Collection Effort		3,492		8			0	3,500	8
									0		
		RECFIN							0		
	BSF	(Base)		3,193		7			0	3,200	7
	BSF	(Enhance Annual Collection & Analysis of Economic Data)		499		1			0	500	1
		Subtotal RECFIN	0	3,692	0	8			0	3,700	8
									0		
		Total Fishery Industry Information	175	37,548	(600)	82	722	9,365	157	47,117	9,569
		Information Analysis & Dissemination							0		
	BSF	(Base-BSF)	213	19,205		46	2,636	0	197	21,887	2,682
	RPS	(Base-RPS)		1,266			(1,266)	0	0	0	(1,266)
	SHC	(Base-SHC)		633			(633)	0	0	0	(633)
		Subtotal Information Analysis & Dissemination	213	21,104	0	46	737	0	197	21,887	783
									0		
A	BSF	Computer Hardware & Software	0	3,492		8		500	0	4,000	508
									0		
		Total Information Analysis & Dissemination	213	24,596	0	54	737	500	197	25,887	1,291

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			FTE	Amount					FTE	Amount	
		TOTAL INFORMATION, COLLECTION & ANALYSES	1,379	255,316	(12,280)	664	5,312	24,765	1,331	273,777	18,461
		CONSERVATION AND MANAGEMENT OPERATIONS									
		Fisheries Management Programs Base									
	BSF	(Base)	274	29,224		51	1,982	0	265	31,257	2,033
A	BSF	(NMFS Facilities Operations & Maintenance)		3,991		9		400	0	4,400	409
	RPS	(Rancho Nuevo Sea Turtles/Loggerhead)		349		1			0	350	1
	BSF	(Atlantic Salmon Recovery Plan)		449		1			0	450	1
	BSF	(American Fisheries Act Implementation - Base)		5,688		12			0	5,700	12
	BSF	(N. Pacific Fishery Mgmt Council)		499		1			0	500	1
	BSF	(State of Alaska)		499		1			0	500	1
	BSF	(Chinook Salmon Management)		150					0	150	0
	BSF	(State of Maine Recovery Plan)		150					0	150	0
	BSF	(Pacific Coral Reef Management)		0					0	0	0
	BSF	(Bronx River Recovery & Restoration Intertidal)		499	(499)			0	0		(499)
E	BSF	(Reduce Gear Impacts on EFH)		0				1,000	0	1,000	1,000
E	BSF	(Refine Essential Fish Habitat Designations)		0				1,500	0	1,500	1,500
E	BSF	(Fishery Observers - Improve Data Collection)		0				4,000	8	4,000	4,000
	BSF	(Connecticut River Partnership)		299	(299)			0	0		(299)
		Subtotal Fisheries Management Programs Base	274	41,797	(798)	76	1,982	6,900	273	49,957	8,160
		(Data Collection - NEPA)									
	BSF	NMFS NEPA		7,983		17			0	8,000	17
	BSF	Hawaiian Sea Turtle Research		2,993		7			0	3,000	7
	BSF	Stellar Sea Lion/Pollock (\$6m OAR, \$2M NOS, \$2M No Pacific Management Council)		9,978		22			0	10,000	22
		Subtotal Data Collection - NEPA	0	20,954	0	46	0	0	0	21,000	46
		Subtotal Fisheries Management Programs	274	62,751	(798)	122	1,982	6,900	273	70,957	8,206
C	BSF	Coral Reef Program (COA)		10,976		24			10	11,000	24
		Columbia River Hatcheries									
	BSF	(Columbia River Hatcheries - Base)		11,430		27			0	11,457	27
	BSF	(Monitor Evaluation & Reform)		1,696		4			0	1,700	4
	BSF	(WA State Fall Chinook Rearing)		599	(599)			0	0	0	(599)
	BSF	(Conservation Mass Marking)		299	(299)			0	0	0	(299)
		Subtotal Columbia River Hatcheries	0	14,024	(898)	31	0	0	0	13,157	(867)
	RPS	Columbia River End. Species Studies		287		12			0	299	12
		Fisheries Habitat Restoration									
E	BSF	(Base)		7,983		17		2,000	0	10,000	2,017
	SHC	(Pinellas County Enviro Foundation, Tampa Bay) COA))		1,497	(500)	3			0	1,000	(497)
	SHC	(Bronx River Restoration (COA))		8,481	(7,500)	19		0	0	1,000	(7,481)
		Subtotal Fisheries Habitat Restoration	0	17,961	(8,000)	39	0	2,000	0	12,000	(5,961)
		NE Fisheries Management									
E	BSF	(NMFS Cooperative Research Implementation)		0				3,500	0	3,500	3,500
	BSF	NE Consortium		4,989		11		0	0	5,000	11

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			FTE	Amount					FTE	Amount	
	BSF	Transfer from USDA - Norton Sound Fisheries Failure		4,989			(4,989)		0		(4,989)
	BSF	Cooperative Research in NE		14,967			(14,967)	5,000	0	5,000	(9,967)
E	BSF	Regional councils		13,121		29		2,500	0	15,650	2,529
	BSF	International fisheries commissions		399		1			0	400	1
	BSF	Management of George's Bank		477		1			0	478	1
		Pacific Tuna Management - Pelagic Fisheries Research							0		
	BSF	(Swordfish Research)		399	0	1	0	0	0	400	1
	BSF	(JIMAR)		2,245		5		0	0	2,250	5
		Subtotal Pacific Tuna Management		2,644	0	6	0	0	0	2,650	6
									0		
		TOTAL FISHERIES MANAGEMENT PROGRAMS	274	147,585	(9,696)	276	(17,974)	19,900	283	140,091	(7,494)
		Protected Species Management							0		
		(Base)	159	6,025	0	13	2,472		303	8,510	2,485
	RPS	(State of Maine Atlantic Salmon Recovery)		1,497		3			0	1,500	3
	RPS	(California Sea Lions)		748		2			0	750	2
	RPS	(Species Mgmt & Estuarine Conservation-NFWF((COA))		998		2			0	1,000	2
	RPS	(Marine Mammal Strandings) COA))		3,991		9			0	4,000	9
	RPS	(Bottle Nose Dolphins)		748	0	2			0	750	2
		Subtotal Protected Species Management	159	14,007	0	31	2,472	0	303	16,510	2,503
									0		
		Driftnet Act Implementation							0		
		(Base)		3,168		7			0	3,175	7
	RPS	(Observer Coverage in Russian EEZ)		249		1			0	250	1
	RPS	(State Participation-Alaska and Washington)		200		0			0	200	0
	RPS	(Pacific Rim Fisheries Program)		150		0			0	150	0
		Subtotal Driftnet Act Implementation	0	3,767	0	8	0	0	0	3,775	8
		Marine Mammal Protection Act							0		
	RPS	(Base)		7,209		16			0	7,225	16
	RPS	(State of Alaska Harbor Seal Research)		898		2			0	900	2
		Subtotal Marine Mammal Protection Act	0	8,107	0	18	0	0	0	8,125	18
									0		
		Endangered Species Act Recovery Plan							0		
	RPS	(Alaska Region Stellar Sea Lion Recovery)	106	848		2			195	850	2
E	RPS	(Sea Turtles)		3,331		7		3,000	0	6,338	3,007
E	RPS	(Marine Mammals)		3,492		8		1,000	0	4,500	1,008
	RPS	(Other Species)		2,694		6			0	2,700	6
	RPS	(Pacific Salmon Recovery and Restoration)		36,370		80		0	10	36,450	80
	RPS	(Technical Support to Washington)		1,497		3		0	0	1,500	3
E	RPS	(Atlantic Salmon Conservation)		1,996		4		1,500	15	3,500	1,504
E	RPS	(Right Whale Base)		2,095		5		2,000	0	4,100	2,005
E	RPS	(Right Whale Activities NE Consortium)		2,894		6		0	0	2,900	6
		Subtotal Endangered Species Act Recovery Plan	106	55,217	0	121	0	7,500	220	62,838	7,621
									0		
	RPS	Dolphin Encirclement Studies	9	3,293		7		0	9	3,300	7
									0		0

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			FTE	Amount					FTE	Amount	
		Native Marine Mammals							0	0	0
	RPS	(Alaska Eskimo Whaling Commission)		399		1		0	0	400	1
	RPS	(Alaska Harbor Seal Commission)		150		0			0	150	0
	RPS	(Beluga Whale Committee)		225		0			0	225	0
	RPS	(Bristol Bay Native Association)		50		0			0	50	0
	RPS	(Aleut Marine Mammal Commission)		125		0			0	125	0
		Subtotal Native Marine Mammals	0	949	0	1	0	0	0	950	1
		Observers and Training							0		
	RPS	(North Pacific Marine Resource Observers)		1,871		4			0	1,875	4
	BSF	(West Coast Observers)		2,270		5			0	2,275	5
	BSF	(North Pacific Observer Training Program)		424		1			0	425	1
	BSF	(Hawaiian Long Line Observer)		1,197		3			0	1,200	3
	BSF	(Atlantic Coast Observers)		349		1			0	350	1
	BSF	(Atlantic Coast Observers) (COA))		2,993		7			0	3,000	7
	BSF	(East Coast Observers)		349		1			0	350	1
		Subtotal Observers and Training	0	9,453	0	22	0	0	0	9,475	22
		Total Protected Species Management	274	94,793	0	208	2,472	7,500	532	104,973	10,180
	SHC	Habitat Conservation	81	10,118	0	22	357	0	92	10,497	379
		Enforcement & Surveillance							0		
E	BSF	(Base - BSF)	168	18,514		40	569	3,300	179	22,423	3,909
E	BSF	(Vessel Management System - BSF)		1,297		3		6,100	0	7,400	6,103
E	BSF	(Cooperative Agreements with States - COA)		14,967		33			0	15,000	33
E	RPS	(Cooperative Agreements with States)		2,494		6		0	10	2,500	6
		Total Enforcement & Surveillance	168	37,272	0	82	569	9,400	189	47,323	10,051
		Total, Conservation and Management Operations	797	289,768	(9,696)	588	(14,576)	36,800	1,096	302,884	13,116
		State and Industry Assistance Programs							0		
		Grants to States							0		
	BSF	(Interjurisdictional fisheries grants)		2,584		6			0	2,590	6
	BSF	(Anadromous grants)		2,095		5			0	2,100	5
		(Interstate Fish Commissions)							0		0
	BSF	[3 Commissions]		748		2			0	750	2
	BSF	[Atlantic Cooperative Management]		7,234		16			0	7,250	16
		Total State and Industry Assistance Programs	0	12,661	0	29	0	0	0	12,690	29
		Fisheries Development Program							0		
	BSF	[Product quality and safety]	125	8,310		18	357		130	8,685	375
	BSF	(Hawaiian Fisheries Development)		748	(748)			0	0	0	(748)
	BSF	(Alaska Salmon Disaster Assistance)		7,484	(7,484)			0	0	0	(7,484)
	BSF	(Hawaiian Long Line Fishery Economic Assistance)		2,993	(2,993)			0	0	0	(2,993)
	BSF	(Southwest Alaska Municipal Economic Disaster Relief)		29,934	(29,934)			0	0	0	(29,934)
		Total Fisheries Development Program	125	49,469	(41,159)	18	357	0	130	8,685	(40,784)
		TOTAL STATE & INDUSTRY ASSISTANCE PROGRAMS	125	62,130	(41,159)	47	357	0	130	21,375	(40,755)
		Acquisition of Data							0		0
	BSF	(Base - BSF)	351	19,057			(19,057)		0		(19,057)

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			FTE	Amount					FTE	Amount	
	RPS	(Base - RPS)		7,784			(7,784)		0		(7,784)
		Acquisition of Data	351	26,841			(26,841)		0		(26,841)
		TOTAL ORF NMFS (FY 00 & 01 Includes Acquisition of Data)	2,652	634,055	(63,135)	1,299	(35,748)	61,565	2,557	598,036	(36,019)

FY 2002 Crosscut Initiatives

A	PI	People & Infrastructure
B	MSC	Maintain Satellite Continuity & Server Weather Forecasts
C	CCA	Coastal Conservation Activities
D	CS	Climate Services
E	MNF	Modernization of NOAA Fisheries
F	MTS	Modernization of the Marine Transportation System

OCEANIC AND ATMOSPHERIC RESEARCH
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		Climate and Air Quality Research									
		Interannual & Seasonal Climate Research									
	SI	(Interannual & Seasonal Climate Research - Base)	26	12,915		28	310	0	27	13,253	338
	SI	(Climate Change Research Center) Inst. Study of Earth , Oceans & Space		1,996		4		0	0	2,000	4
		Subtotal, Interannual & Seasonal Climate Research	26	14,911	0	32	310	0	27	15,253	342
		Long-term Climate & Air Quality Research									
	SI	(Long-Term Climate & Air Quality Base - SI)	215	4,724		74	6,833		44	11,631	6,907
	PADCC	(Long-Term Climate & Air Quality Base - PADCC)		23,065					167	23,065	0
	PADCC	(Central CA Ozone Study)		499	(499)	0	0	0	0	0	(499)
	PADCC	(Health of the Atmosphere & Related Programs)		4,659	0	0	(4,659)	0	0	0	(4,659)
		Subtotal, Long-term Climate & Air Quality Research	215	32,947	(499)	74	2,174	0	211	34,696	1,749
	PADCC	High Performance Computing	6	12,722	0	28	56	0	6	12,806	84
		TOTAL LONG-TERM CLIMATE & AIR QUALITY RESEARCH	247	60,580	(499)	134	2,540	0	244	62,755	2,175
		Climate Observation & Service									
D	PADCC	(Climate Reference Network)		2,993		7		0	0	3,000	7
D	SI	(Climate Data & Information - SI) (and CLASS; in PAC)		998		2			0	1,000	2
D	SI	(Ice Physics Research (Thayer School of Engineering)		1,247	(1,247)				0		(1,247)
D	SI	(Baseline Observatories - SI)		1,996		4		0	3	2,000	4
D	SI	(Ocean Observations - SI)		4,989		13		0	2	5,002	13
D	SI	(Region Assessments, Education and Outreach)		0				1,850	0	1,850	1,850
D	PADCC	(Assessments/Services - Climate Change Assessment)		0				650	0	650	650
	SI	(Weather-Climate Connection)		0				900	0	900	900
D	PADCC	(Carbon Cycle)		0				2,300	0	2,300	2,300
D	SI	(Ocean System for Improved Climate Service SI)		0				3,100	0	3,100	3,100
D	PADCC	(Ocean System for Improved Climate Service PADCC)		0				4,200	0	4,200	4,200
		Subtotal, Climate Observations & Services	0	12,223	(1,247)	26	0	13,000	5	24,002	11,779
	PADCC	GLOBE	9	2,993	0	8	56		9	3,057	64
		Climate and Global Change									
	PADCC	(Climate and Global Change Base - PADCC)	113	29,260		140	219		61	29,619	359
	SI	(Climate and Global Change Base - SI)		34,350					47	34,350	0
	SI	(Variability Beyond ENSO)		998		2		0	0	1,000	2
	PADCC	(Restoration to IRI for Climate Prediction)		748		2		0	0	750	2
	PADCC	(Climate Forcing Agents)		998		2		0	0	1,000	2
	SI	(Refinement of Climate Models) IRI		1,996		4		0	0	2,000	4
		Subtotal, Climate and Global Change	113	68,350	0	150	219	0	108	68,719	369
		TOTAL, CLIMATE AND AIR QUALITY RESEARCH	369	144,146	(1,746)	318	2,815	13,000	366	158,533	14,387
		Atmospheric Programs									
		WEATHER RESEARCH									
	AST	(Weather Research Base)	216	34,923		78	1,486	0	211	36,487	1,564
B	AST	(NDRI - USWRP)	3	1,497		3		2,231	5	3,731	2,234
	AST	(Research related to profile data)		998		2		0	0	1,000	2
	AST	STORM (U of N. Iowa)		349	(349)	0		0	0	0	(349)
	AST	Wind Profiler		4,340		10		0	0	4,350	10

OCEANIC AND ATMOSPHERIC RESEARCH

(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		Subtotal Weather Research	219	42,107	(349)	93	1,486	2,231	216	45,568	3,461
	AST	Solar - Terrestrial Services and Research (Solar-Terrestrial Service and Research Base)	62	5,987		14	247	0	65	6,248	261
		Subtotal, Solar-Terrestrial Services and Research	62	5,987	0	14	247	0	65	6,248	261
		TOTAL, ATMOSPHERIC PROGRAM	281	48,094	(349)	107	1,733	2,231	281	51,816	3,722
		OCEAN AND GREAT LAKES PROGRAMS									
		Marine Environmental Research									
	SI	(Marine Environmental Research Base - SI)	95	2,940		49	784	500	28	4,273	1,333
	PADCC	(Marine Environmental Research Base - PADCC)		4,314					71	4,314	0
	BSF	(Marine Environmental Research Base - BSF)		2,549					0	2,549	0
	SHC	(Marine Environmental Research Base -SHC))				0		499	0	499	499
	PADCC	(VENTS Base)		2,095		5		0	0	2,100	5
	BSF	(Marine Aquaculture Base)		2,594		6	5,837	(4,831)	1	3,606	1,012
	BSF	(Marine Aquaculture) COA))		2,993			(2,993)		0	0	(2,993)
	SHC	(Hypoxia)		499	(499)				0	0	(499)
	SHC	(NISA Implementation / Aquatic Nuisance Species)		798		2		0	0	800	2
	SHC	(NISA/Chesapeake Bay/Ballast/Water)		848	(848)				0	0	(848)
	SHC	(Arctic Research)		1,646		4			0	1,650	4
	AST	(Tsunami Hazard Mitigation)		3,293	(1,000)	7			0	2,300	(993)
	SI	(International Pacific Research Center - U. of HI)		499		1			0	500	1
	SHC	(SE Atlantic Marine Monitoring & Prediction - U. of NC)		998	(998)	0			0	0	(998)
	SHC	(Lake Champlain Study)		150	(150)	0			0	0	(150)
	SHC	(Champlain Canal Barrier Demo)		100	(100)	0			0	0	(100)
	BSF	(Pacific Tropical Ornamental Fish)		449		0	(449)		0	0	(449)
	BSF	(Open Ocean Aquaculture)		2,395		0	(2,395)		0	0	(2,395)
	SHC	(Ocean Exploration)		1,996		4	(2,000)		0	0	(1,996)
	SHC	(Aquatic Ecosystem - Nitrogen Study Canaan Valley Inst)		4,291	(4,291)	0			0	0	(4,291)
		Subtotal, Marine Environmental Research	95	35,447	(7,886)	78	(1,216)	(3,832)	100	22,591	(12,856)
		GLERL							0		
	SI	(GLERL)	58	699		15	0	0	55	714	15
	AST	(GLERL)		768		0			0	768	0
	SHC	(GLERL)		5,518					0	5,518	0
		Subtotal, GLERL	58	6,985	0	15	0	0	55	7,000	15
		National Sea Grant College Program							0		
	BSF	(National Sea Grant College Program Base - Base)	21	20,766		122	152	0	7	21,040	274
	SHC	(National Sea Grant College Program Base - Base)		35,360					15	35,360	0
	BSF	(Gulf of Mexico Oyster Initiative)		998		2		0	0	1,000	2
	SHC	(Aquatic Nuisance Species/Zebra Mussel Research)		2,993		7		0	0	3,000	7
	BSF	(Oyster Disease Research)		1,996		4		0	0	2,000	4
		Subtotal, Sea Grant	21	62,113	0	135	152	0	22	62,400	287
		National Under Sea Research									
	BSF	(NOAA USRP Base)	8	5,508		35	917	0	3	6,460	952

OCEANIC AND ATMOSPHERIC RESEARCH
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
	SHC	(NOAA USRP Base)		8,261			(873)	0	5	7,388	(873)
	SHC	(National Center for Natural Products Univ of Miss.)		1,996	(1,996)			0	0		(1,996)
											0
		Subtotal, Undersea Research Program	8	15,765	(1,996)	35	44	0	8	13,848	(1,917)
		Ocean Exploration									
	BSF	Ocean Exploration - BSF		300		0	0	200	0	500	200
	RPS	Ocean Exploration - RPS		100		0	0	300	0	400	300
	PSN	Ocean Exploration - PSN		100		0	0	800	0	900	800
	SHC	Ocean Exploration - SHC		1,496		4	2,000	8,700	8	12,200	10,704
		Subtotal, Ocean Exploration	0	1,996	0	4	2,000	10,000	8	14,000	12,004
		TOTAL, OCEAN & GREAT LAKES PROGRAMS	182	122,306	(9,882)	267	980	6,168	193	119,839	(2,467)
		Acquisition of Data							0		
	AST	(Acquisition of Data - Base)	112	518			(518)	0	0	0	(518)
	SI	(Acquisition of Data - Base)		6,074			(6,074)		0	0	(6,074)
	PADCC	(Acquisition of Data - Base)		4,394			(4,394)		0	0	(4,394)
	BSF	(Acquisition of Data - Base)		1,292			(1,292)		0	0	(1,292)
	SHC	(Acquisition of Data - Base)		646			(646)		0	0	(646)
		Subtotal, Acquisition of Data	112	12,924	0	0	(12,924)	0	0	0	(12,924)
		TOTAL ORF OAR (FY 00 & 01 Includes Acquisition of Data)	944	327,470	(11,977)	692	(7,396)	21,399	840	330,188	2,718

FY 2002 Crosscut Initiatives

A	PI	People & Infrastructure
B	MSC	Maintain Satellite Continuity & Serve Weather Forecasts
C	CCA	Coastal Conservation Activities
D	CS	Climate Services
E	MNF	Modernization of NOAA Fisheries
F	MTS	Modernization of the Marine Transportation System

NATIONAL WEATHER SERVICE
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY 2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		OPERATIONS AND RESEARCH									
		Local Warning and Forecasts									
	AST	(Local Warnings and Forecasts Base)	3,944	448,309		799	21,177	0	3,971	470,285	21,976
	AST	(Office of Fed Coordinator for Meteorology)					(1,059)	0	0	(1,059)	(1,059)
	AST	(Sustain Base Operations)		2,976		7		0	0	2,983	7
	AST	(Data Buoy & CMAN Continuity)		3,343		7		0	0	3,350	7
	AST	(Secretary's Mitigation)		4,779		11		0	0	4,790	11
A	SI	(Cooperative Observers Network)		399		0		1,900	0	2,299	1,900
	AST	(Coop Institute Utah - 2002 Olympics)		589	-589	0	0	0	0	0	(589)
	AST	(Mt. Washington Observatory)		499	-499	0	0	0	0	0	(499)
	AST	(NOAA Weather Radio Transmitters)		2318	0	5	0	0	0	2,323	5
	AST	(NOAA Weather Radio Transmitters - Barrow, AK)		100	-100	0	0	0	0	0	(100)
	AST	(NOAA Weather Radio Transmitters - Stuben, co., IN)		78	-78	0	0	0	0	0	(78)
	AST	(NOAA Weather Radio Transmitters - IL)		499	-499	0	0	0	0	0	(499)
	AST	(NOAA Weather Radio Transmitters - KY)		853	-853	0	0	0	0	0	(853)
	AST	(NOAA Weather Radio Transmitters - Mason, KY)		77	-77	0	0	0	0	0	(77)
	AST	(NOAA Weather Radio Transmitters - Melba, MS)		100	-100	0	0	0	0	0	(100)
	AST	(NOAA Weather Radio Transmitters - NH)		125	-125	0	0	0	0	0	(125)
	AST	(NOAA Weather Radio Transmitters - SD)		150	-150	0	0	0	0	0	(150)
	AST	(NOAA Weather Radio Transmitter - WY)		0			0	0	0	0	0
	AST	(No. Dakota Ag Weather Network)		269	-269	0	0	0	0	0	(269)
		Subtotal Local Warning and Forecasts	3,944	465,463	(3,339)	829	20,118	1,900	3,971	484,971	19,508
	AST	Advanced Hydrological Prediction System		998		2		0	0	1,000	2
	AST	Susquehanna River Basin Flood System		1,310		3		0	0	1,313	3
A	AST	WFO Maintenance		4,229		9	12	300	0	4,550	321
	AST	Aviation Forecasts		35,518		78		0	0	35,596	78
		TOTAL LOCAL WARNINGS AND FORECASTS	3,944	507,518	(3,339)	921	20,130	2,200	3,971	527,430	19,912
		Central Forecast Guidance:									
	AST	(Central Forecast Guidance Base -AST)	255	32,927		83	1,545	0	172	34,555	1,628
	SI	(Central Forecast Guidance Base -SI)		4,490					41	4,490	0
		Subtotal, Central Forecast Guidance	255	37,417	0	83	1,545	0	213	39,045	1,628
B	AST	NCEP EMC - Sustain Current Operations		0				1,700	0	1,700	1,700
B	AST	Data Assimilation		0				3,000	0	3,000	3,000
	AST	Atmospheric and Hydrological Research	36	3,027		7	116	0	38	3,150	123
		TOTAL, OPERATIONS AND RESEARCH	4,235	547,962	(3,339)	1,011	21,791	6,900	4,222	574,325	26,363
		SYSTEMS OPERATION & MAINTENANCE									
		Public Warning and Forecast Systems									
	AST	NEXRAD	123	38,717		85	1,194	0	88	39,996	1,279
	AST	ASOS	36	7,407		16	228		28	7,651	244
	AST	AWIPS/NOAAPort	12	35,318		78	1,088		13	36,484	1,166
		Subtotal Public Warning and Forecast Systems		81,442	0	179	2,510	0	129	84,131	2,689
		TOTAL, SYSTEMS MAINTENANCE	171	81,442	0	179	2,510	0	129	84,131	2,689

NATIONAL WEATHER SERVICE

(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY 2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		Pay Raise ATB Included		0							
		Undistributed ATBs (Reduced for PAC ATBs Previously Included)		0							
		TOTAL ORF NWS	4,406	629,404	(3,339)	1,190	24,301	6,900	4,351	658,456	29,052

FY 2002 Crosscut Initiatives

A	PI	People & Infrastructure
B	MSC	Maintain Satellite Continuity & Severe Weather Forecasts
C	CCA	Coastal Conservation Activities
D	CS	Climate Services
E	MNF	Modernization of NOAA Fisheries
F	MTS	Modernization of the Marine Transportation System

NATIONAL ENVIRONMENTAL, SATELLITE DATA AND INFORMATION SERVICES
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY 2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Base	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount						FTE	Amount	
		SATELLITE OBSERVING SYSTEMS										
	SHC	Ocean Remote Sensing		3,991		9		4,000		0	4,000	9
	AST	National Hazards Information Strategy (NHIS)		2,993		7		3,000		0	3,000	7
		ENVIRONMENTAL OBSERVING SERVICES										
B	AST	(EOS Base)	487	50,688		117	2,293	53,098	11,860	520	64,958	14,270
B	AST	(Commercial Remote Sensing License)		0					1,200	0	1,200	1,200
B	AST	(Joint Center for Satellite Data Assimilation)		0					750	0	750	750
C	SHC	(Coral Reef Monitoring)		0					750	0	750	750
A	AST	(Critical Single Point of Failure)		0					250	0	250	250
	AST	(Global Wind Demonstration)		2,495				2,495	(1,495)	0	1,000	(1,495)
		Subtotal Environmental Observing Services	487	53,183	0	117	2,293	55,593	13,315	520	68,908	15,725
		Total, Satellite Observing Systems	487	60,167	0	133	2,293	62,593	13,315	520	75,908	15,741
		ENVIRONMENTAL DATA MANAGEMENT SYSTEMS										
		Data and Information Services										
B	AST	(Data & Info. Services Base)	264	998	0	0	0	998	4,452	247	5,450	4,452
B	SI	(Data & Info. Services Base)		17,711		66	1,979	19,756		0	19,756	2,045
B	PADCC	(Data & Info. Services Base)		2,993				2,993		0	2,993	0
B	RPS	(Data & Info. Services Base)		1,247				1,247		0	1,247	0
B	SHC	(Data & Info. Services Base)		1,996				1,996		0	1,996	0
E	BSF	(Fisheries Oceanography)		0				0	500	0	500	500
	SI	(Nat'l Coastal Ocean Data Development and Mgmt Ctr)		5,987		13		6,000	(1,487)	0	4,513	(1,474)
	SI	(Center for Spatial Data Research and Application at Jackson State		2,494	(2,494)					0	0	(2,494)
	PADCC	(Climate Reference Network) formerly Coop Network Modernization))		499		1		500		0	500	1
	SI	(Climate Database Modernization)		15,665		35		15,700	(9,486)	0	6,214	(9,451)
E	SHC	(Habitat-Characterization)		0					250	0	250	250
		Subtotal Data and Information Services	264	49,590	(2,494)	115	1,979	49,190	(5,771)	247	43,419	(6,171)
		Environmental Data Systems Modernization (ESDIM Base program)		12,308		27		12,335		0	12,335	27
	SI	Regional Climate Centers		2,894	(2,894)							(2,894)
		TOTAL, ENVIRONMENTAL DATA MANAGEMENT SYSTEM	264	64,792	(5,388)	142	1,979	61,525	(5,771)	247	55,754	(9,038)
		TOTAL ORF NESDIS	751	124,959	(5,388)	275	4,272	124,118	7,544	767	131,662	6,703

FY 2002 Crosscut Initiatives

A	PI	People & Infrastructure
B	MSC	Maintain Satellite Continuity & Severe Weather Forecasts
C	CCA	Coastal Conservation Activities
D	CS	Climate Services
E	MNF	Modernization of NOAA Fisheries
F	MTS	Modernization of the Marine Transportation System

**PROGRAM SUPPORT
(\$ IN THOUSANDS)**

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
A	INFRA BSF RPS AST	CORPORATE SERVICES									
		Under Secretary and Associate Offices	280	19,858		191	2,806	67	248	22,922	3,064
		National Academy of Sciences Oceanographic Study		748	(748)				0	0	(748)
		NOAA Study of NMFS Meeting Legal Missions & Requirements		748	(748)				0	0	(748)
		Office of Federal Coordinator for Meteorological Services		0		0	1,059	0	7	1,059	1,059
		Subtotal, Undersecretary and Associate Offices	280	21,354	(1,496)	191	3,865	67	255	23,981	2,627
		Policy Formulation and Direction									
		Central Administration Support (CAS)									
		(CAS Base)	759	33,059	0	73	(915)	0	679	32,217	(842)
		Educational Partnership Program w/Minority Serving Institutions (EPPMSI)	4	14,967		33		0	4	15,000	33
		Systems Acquisition Office (SAO)	9	710		2		0	9	712	2
	INFRA INFRA INFRA SHC	Restoration of DOC Security Appropriation					3437	0	0	3,437	3,437
		Subtotal, Policy Formulation and Direction	772	48,736	0	108	2,522	0	692	51,366	2,630
		TOTAL, CORPORATE SERVICES	1,052	70,090	(1,496)	299	6,387	67	947	75,347	5,257
	AST SI PADCC PSN RPS SHC	Office of Marine and Aviation (OMAO) (Program Support)							0		
		Aviation Operations (Aircraft Services)									
		(Aircraft Services Base)	106	8,366		26	887	0	108	12,696	4,330
		(Aircraft Services Base)		118					2		(118)
		(Aircraft Services Base)		1,767					0		(1,767)
		(Aircraft Services Base)		1,296					0		(1,296)
		(Aircraft Services Base)		118					0		(118)
		(Aircraft Services Base)		118					0		(118)
		Subtotal, Aviation Operations (Aircraft Services)	106	11,783	0	26	887	1,488	110	14,184	2,401
		Marine Operations									
		Marine Services (Acquisition of Data) - Transferred from Line Offices to OMAO									
	PSN SHC PSN	(Acquisition of Data - NOS)		0		40	18,964	1,000	301	20,004	20,004
		(Acquisition of Data - Base)		0		2	998		0	1,000	1,000
		(NOAA Corps Office Support) COA))		0					0	0	0
		(NOAA Corps Office Support) COA))		0			0	0	0	0	0
		(Acquisition of Data Increase)		0							
	BSF RPS	Subtotal, Acquisition of Data - NOS	0	0	0	42	19,962	1,000	301	21,004	21,004
		(Acquisition of Data - NMFS)									
		(Base - BSF)		0		42	20,497	42	387	20,581	20,581
		(Base - RPS)		0		17	7,784	813	0	8,614	8,614
		Subtotal, Acquisition of Data - NMFS	0	0	0	59	28,281	855	387	29,195	29,195
	AST	(Acquisition of Data - OAR)									
		(Acquisition of Data - Base)		0							0

**PROGRAM SUPPORT
(\$ IN THOUSANDS)**

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
	SI	(Acquisition of Data - Base)		0		14	8,012		140	8,026	8,026
	PADCC	(Acquisition of Data - Base)		0		14	5,590		0	5,604	5,604
	BSF	(Acquisition of Data - Base)		0					0		0
	SHC	(Acquisition of Data - Base)		0					0		0
		Subtotal, Acquisition of Data - OAR	0	0		28	13,602	0	140	13,630	13,630
		Subtotal, Marine Services (Acquisition of Data)	0	0	0	129	61,845	1,855	828	63,829	63,829
		(Fleet Maintenance and Planning)									
	SHC	(Fleet Maintenance and Planning - Base)	12	10,986		24	110	0	6	11,120	134
		Subtotal, Marine Operations	12	10,986	0	153	61,955	1,855	834	74,949	63,963
		Total, Office of Marine and Aviation Operations	118	22,769	0	179	62,842	3,343	944	89,133	66,364
		Y2K Actuals Only									
		TOTAL ORF PS	1,170	92,859	(1,496)	478	69,229	3,410	1,891	164,480	71,621

FY 2002 Crosscut Initiatives

A	PI	People & Infrastructure
B	MSC	Maintain Satellite Continuity & Severe Weather Forecasts
C	CCA	Coastal Conservation Activities
D	CS	Climate Services
E	MNF	Modernization of NOAA Fisheries
F	MTS	Modernization of the Marine Transportation System

FACILITIES MAINTENANCE
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Operations, Research and Facilities	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Reques Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		Facilities									
A	INFRA	NOAA Maintenance, Repairs and Safety	6	1,866		18	770	982	6	3,636	1,770
	INFRA	Environmental Compliance	9	1,996		4		0	9	2,000	4
	RPS	Columbia River Facilities		3,358		7			0	3,365	7
A	AST	Boulder Facilities Operations - AST		1,596		4		400	0	2,000	404
A	PADCC	Boulder Facilities Operations - PADCC		1,596		4		400	0	2,000	404
A	SI	Boulder Facilities Operations - SI		799		1		200	0	1,000	201
	INFRA	Facility Planning & Construction Support							0	0	0
	INFRA	Employee Health & Safety							0	0	0
	SHC	Pribiloff Island Cleanup (Moved from PAC in OMB Passback Appeal)					5,987	(1,987)	0	4,000	4,000
		TOTAL FACILITIES	15	11,211	0	38	6,757	(5)	15	18,001	6,790

FY 2002 Crosscut Initiatives

A	PI	People & Infrastructure
B	MSC	Maintain Satellite Continuity & Severe Weather Forecasts
C	CCA	Coastal Conservation Activities
D	CS	Climate Services
E	MNF	Modernization of NOAA Fisheries
F	MTS	Modernization of the Marine Transportation System

ORF Summary
LINE AND STAFF OFFICE DIRECT OBLIGATIONS
(\$ in Thousands)

NOAA CONTROL TABLE Operations, Research and Facilities	FY 2001 Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Base	FY 2002 President's Request Program Change	FY 2002 President's Request		Change From FY 2001 Enacted
	FTE	Amount						FTE	Amount	
National Ocean Service	1,324	390,141	(47,695)	816	(8,929)	334,333	30,153	954	364,486	(25,655)
National Marine Fisheries Service	2,652	634,055	(63,135)	1,299	(35,748)	536,471	61,565	2,557	598,036	(36,019)
Office of Oceanic and Atmospheric Research	944	327,470	(11,977)	692	(7,396)	308,789	21,399	840	330,188	2,718
National Weather Service	4,406	629,404	(3,339)	1,190	24,301	651,556	6,900	4,351	658,456	29,052
National Environ. Sat. Data & Info Service	751	124,959	(5,388)	275	4,272	124,118	7,544	767	131,662	6,703
Program Support	1,170	92,859	(1,496)	478	69,229	161,070	3,410	1,891	164,480	71,621
Facilities	15	11,211	0	38	6,757	18,006	(5)	15	18,001	6,790
Subtotal Line & Staff Office Direct Obligations, ORF	11,262	2,210,099	(133,030)	4,788	52,486	2,134,343	130,966	11,375	2,265,309	55,210

ORF GENERAL ADJUSTMENTS & FINANCING
(\$ in Thousands)

NOAA CONTROL TABLE Operations, Research and Facilities	FY 2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
	FTE	Amount					FTE	Amount	
Subtotal Line & Staff Office Direct Obligations, ORF	11,262	2,210,099	(133,030)	4,788	52,486	130,966	11,375	2,265,309	55,210
FINANCING									
Deobligations		(16,613)		(37)	(350)	0		(17,000)	(387)
Additional Adjustments ("financing from" in Congress):									
Domestic Travel		(3,991)		(9)		4,000		0	3,991
Foreign Travel		(2,398)		(2)		2,400		0	2,398
General Office Supplies		(4,989)		(11)		5,000		0	4,989
Non-Maritime/Con-Capitalized Equipment		(2,993)		(7)		3,000		0	2,993
Subtotal ORF Adjustments	0	(30,984)	0	(66)	(350)	14,400	0	(17,000)	13,984
TOTAL DISCRETIONARY ORF BUDGET AUTHORITY	11,262	2,179,115	(133,030)	4,722	52,136	145,366	11,375	2,248,309	69,194
Transfers:									
Promote & Develop American Fisheries		(68,000)		0				(68,000)	0
Coastal Zone Management Fund					(3,000)			(3,000)	(3,000)
Coastal & Ocean Activities Transfer		(165,500)			165,500				165,500
Transfer from USDA		(20,000)			20,000			0	20,000
Subtotal ORF Transfers	0	(253,500)	0	0	182,500	0	0	(71,000)	182,500
TOTAL CJS ORF APPROPRIATION	11,262	1,925,615	(133,030)	4,722	234,636	145,366	11,375	2,177,309	251,694

PROCUREMENT, ACQUISITION AND CONSTRUCTION SUMMARY
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Procurement, Acquisition and Construction	FY 2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		NOS Systems Acquisition: NONE Construction:									
A	SHC	Beaufort Lab Repairs		0	0			1,000	0	1,000	1,000
A	SHC	Coastal Service Center (Wing)		0	0			1,000	0	1,000	1,000
	SHC	Folly Beach Seabrook Track (SC)		1,996	(1,996)						(1,996)
C	SHC	Great Bay Partnership (COA)		2,993	(2,993)						(2,993)
C	SHC	Marine Sanctuaries (COA)		2,993				13,000	0	15,993	13,000
	SHC	National Estuarine Research Reserve Construction		6,984				2,928	0	9,912	2,928
	SHC	Orange County, CA - Land Acquisition (COA)		1,995	(1,995)						(1,995)
	SHC	Pribilof Island Cleanup (NOS) Moved to ORF in OMB Passback		5,987			(5,987)			0	(5,987)
		Subtotal Construction	0	22,948	(6,984)	0	(5,987)	17,928	0	27,905	4,957
		NERRS Construction:									
C	SHC	ACE Basin - Construction (COA) - NERRS		7,987	(7,987)						(7,987)
C	SHC	ACE Basin - Land Acquisition(COA) - NERRS		1,996	(1,996)						(1,996)
C	SHC	Great Bay NERRS, NH		4,989	(4,989)						(4,989)
C	SHC	Jacques Cousteau NERRS		499	(499)						(499)
C	SHC	Kachemak Bay NERRS		4,989	(4,989)						(4,989)
C	SHC	Kachemak Bay Research Center NERRS - NOS (COA)		3,991	(3,991)						(3,991)
C	SHC	Raritan, NJ - Land Acquisition - (COA) - NERRS		998	(998)						(998)
C	SHC	San Francisco (COA) - NERRS		2,993	(2,993)						(2,993)
C	SHC	Winyah Bay - Land Acquisition (COA) - NERRS		2,494	(2,494)						(2,494)
		Subtotal NERRS Construction	0	30,936	(30,936)	0	0	0	0	0	(30,936)
		Subtotal, NOS Construction	0	53,884	(37,920)	0	(5,987)	17,928	0	27,905	(25,979)
		Total NOS - PAC	0	53,884	(37,920)	0	(5,987)	17,928	0	27,905	(25,979)
		NMFS Systems Acquisition: NONE Construction:									
	BSF	Aquatic Resources		4,989	(4,989)						(4,989)
	BSF	Alaska Facilities Fisheries Center Juneau		14,967	0			(3,267)	0	11,700	(3,267)
	BSF	Botanical Gardens		3,492	(3,492)						(3,492)
	BSF	Charleston Fort Johnson (FY 2000 Carryover only)									0
	BSF	East Kentucky Pride Inc - Aquatic Res Enviro Initiative (COA)		4,989	(4,989)						(4,989)
	BSF	East Kentucky Pride Inc - Design & Construct (COA)		10,976	(10,976)						(10,976)
A	BSF	Honolulu		0				3,000	0	3,000	3,000
	BSF	National Marine Life Center, NJ		798	(798)						(798)
	BSF	Outer Banks Community Foundation (FY 2000 Actuals only)									0
	BSF	Santa Cruz Research Lab									0
	BSF	SeaLife Center		3,991	(3,991)						(3,991)
	BSF	SeaLife Center (COA)		9,978	(9,978)						(9,978)
	BSF	Ship Creek (FY 2000 Carryover only)		0							0
		Subtotal, NMFS Construction	0	54,180	(39,213)	0	0	(267)	0	14,700	(39,480)

PROCUREMENT, ACQUISITION AND CONSTRUCTION SUMMARY
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Procurement, Acquisition and Construction	FY 2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
	BSF	Fleet Replacement: Fisheries Research Vessel Replacement (NMFS)	0	8,282	(8,282)						(8,282)
		Subtotal, NMFS Fleet Replacement	0	8,282	(8,282)	0	0	0	0	0	(8,282)
		Total, NMFS - PAC	0	62,462	(47,495)	0	0	(267)	0	14,700	(47,762)
		OAR									
		Systems Acquisition:									
D	INFRA	HPCC/GFDL Supercomputer		3,991				2,993	0	6,984	2,993
D	PADCC	Comprehensive Large Array Data Stewardship Sys.(CLASS)		1,995				1,631	0	3,626	1,631
		Subtotal, OAR Systems Acquisition	0	5,986	0	0	0	4,624	0	10,610	4,624
		Construction:									
	PADCC	Boulder Research Lab									0
	AST	Norman Consolidation Project		2,993	(2,993)						(2,993)
	SHC	University of NH Marine Facilities (COA)		13,969	(13,969)						(13,969)
		Subtotal, OAR Construction:	0	16,962	(16,962)	0	0	0	0	0	(16,962)
		Total, OAR - PAC	0	22,948	(16,962)	0	0	4,624	0	10,610	(12,338)
		NWS									
		Systems Acquisition:									
A	AST	ASOS (NWS)		3,846				1,279	0	5,125	1,279
	AST	AWIPS / NOAA Port (NWS)	43	16,264				0	43	16,264	0
	AST	Central Computer Facility		15,052				0	0	15,052	0
	AST	Evansville Doppler Radar		5,491	(5,491)			0	0	0	(5,491)
	AST	NEXRAD	7	8,261				0	7	8,261	0
A	AST	NWSTG Backup - CIP		0				7,460	0	7,460	7,460
	AST	Radiosonde Replacement Program		4,989				0	0	4,989	0
		Subtotal, NWS Systems Acquisition:	50	53,903	(5,491)	0	0	8,739	50	57,151	3,248
		Construction									
A	AST	NWS WFO Construction	5	9,505				2,495	5	12,000	2,495
		Subtotal, NWS Construction	5	9,505	0	0	0	2,495	5	12,000	2,495
		Total NWS - PAC	55	63,408	(5,491)	0	0	11,234	55	69,151	5,743
		NESDIS									
		Systems Acquisition:									
	AST	GOES I-M (NESDIS)		58,486		1		(44,527)	0	13,960	(44,526)
	AST	GOES N-Q (NESDIS)	47	231,698		3		46,113	47	277,814	46,116
	AST	GOES R (NESDIS)	0	0		0		1,500	0	1,500	1,500
B	AST	NOAA K-N (NESDIS)	20	136,684		1		9,603	20	146,288	9,604
B	AST	Polar Convergence	13	73,164				83,400	13	156,564	83,400
		Subtotal, NESDIS Systems Acquisition	80	500,032	0	5	0	96,089	80	596,126	96,094

PROCUREMENT, ACQUISITION AND CONSTRUCTION SUMMARY
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Procurement, Acquisition and Construction	FY 2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
A	AST INFRA INFRA AST INFRA	Construction:									
		Continuity of Critical Facilities for Satellite Operations						4,550		4,550	4,550
		National Center for Environmental Predictions (NCEP)									0
		NORC Rehabilitation									0
		Suitland		14,967				(9,267)	0	5,700	(9,267)
		Subtotal, NESDIS Construction	0	14,967	0	0	0	(4,717)	0	10,250	(4,717)
		Total NESDIS - PAC	80	514,999	0	5	0	91,372	80	606,376	91,377
		PROGRAM SUPPORT									
		Systems Acquisition									
		CAMS		19,779		25		0	0	19,804	25
A A F BSF BSF	RPS BSF PSN BSF BSF	Subtotal, PS Systems Acquisition	0	19,779	0	25	0	0	0	19,804	25
		PROGRAM SUPPORT/OMAO									
		Fleet Replacement									
		ADVENTUROUS Refurbishment		7,982				(3,782)	0	4,200	(3,782)
		ALBATROSS IV Repairs		0				4,000	0	4,000	4,000
		FAIRWEATHER Refurbishment		6,785				2,730	0	9,515	2,730
		GORDON GUNTER		0				1,800	0	1,800	1,800
		Naval Surplus Vessels for Coastal Research (YTT)		4,989	(4,989)					0	(4,989)
		Subtotal, OMAO Fleet Replacement	0	19,756	(4,989)	0	0	4,748	0	19,515	(241)
		Total, Program Support - PAC		39,535	(4,989)	25	0	4,748	0	39,319	(216)
		Other PAC - Fishermen's Health Care									
		Subtotal Line & Staff Office Direct Obligations, PAC	135	757,236	(112,857)	30	(5,987)	129,639	135	768,061	10,825

0

0

FY 2002 Crosscut Initiatives

A	PI	People & Infrastructure
B	MSC	Maintain Satellite Continuity & Severe Weather Forecasts
C	CCA	Coastal Conservation Activities
D	CS	Climate Services
E	MNF	Modernization of NOAA Fisheries
F	MTS	Modernization of the Marine Transportation System

PAC Adjustments

NOAA CONTROL TABLE Procurement, Acquisition and Construction	FY 2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
	FTE	Amount					FTE	Amount	
Subtotal Line & Staff Office Direct Obligations, PAC	135	757,236	(112,857)	30	(5,987)	129,639	135	768,061	10,825
FINANCING									
Cash Refunds									0
Deobligations		(7,487)		(17)	4,304			(3,200)	4,287
Unobligated Balance Start of Year									
Unobligated Balance End of Year									
TOTAL DISCRETIONARY PAC BUDGET AUTHORITY	135	749,749	(112,857)	13	(1,683)	129,639	135	764,861	15,112
Coastal & Ocean Activities Transfer		(68,500)	0	0	68,500	0		0	68,500
TOTAL CJS PAC APPROPRIATION	135	681,249	(112,857)	13	66,817	129,639	135	764,861	83,612

OTHER ACCOUNTS (DISCRETIONARY)
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Other Accounts	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		<u>NOS</u>									
	SHC	Coastal Impact Assistance Fund Obligations		149,670				(149,670)	0	0	(149,670)
		Coastal Impact Assistance Fund Budget Authority DISCRETIONARY (NOS)		149,670				(149,670)	0	0	(149,670)
		Coastal Impact Assistance Fund Appropriation		(330)			330	0	0	0	330
	SHC	Coastal Zone Management Fund Obligations		3,193			(3,193)	0	0	0	(3,193)
		Coastal Zone Management Fund Budget Authority DISCRETIONARY (NOS)		3,193			(3,193)	0	0	0	(3,193)
		Coastal Zone Management Fund Appropriation		3,193			(3,193)	3,000	0	3,000	(193)
		<u>NMFS</u>									
	BSF	Fishermen's Contingency fund Obligations	1	950		2		0	1	952	2
		Fishermen's Contingency fund Budget Authority (NMFS)	1	950		2		0	1	952	2
		Fishermen's Contingency fund Budget Appropriation	1	950		2		0	1	952	2
	BSF	Foreign Fishing Observer Fund Obligations	0	191					0	191	0
		Foreign Fishing Observer Fund Budget Authority (NMFS)	0	191					0	191	0
		Foreign Fishing Observer Fund Appropriation	0	191					0	191	0
	BSF	Fishing Vessel & Gear Damage Compensation Fund Obligations	0	0					0	0	0
		Fishing Vessel & Gear Damage Compensation Fund Budget Authority (NMFS)	0	0					0	0	0
		Fishing Vessel & Gear Damage Compensation Fund Appropriation		0					0	0	0
	BSF	Fisheries Financing Program Obligations		1,285	(998)				0	287	(998)
		(Base)	0	685	(499)				0	187	(498)
		(IFQ entry Level)	0	600	(500)				0	100	(500)
		Fisheries Financing Program Budget Authority (NMFS)	0	1,285	(998)				0	287	(998)
		Fisheries Financing Program Appropriation	0	1,285	(998)				0	287	(998)
	BSF	Promote and Develop Fisheries Obligations		0					0	0	0
		Promote and Develop Fisheries Budget Authority Discretionary (NMFS)		(68,000)						(68,000)	
		Promote and Develop Fisheries Budget Authority DISCRETIONARY (NMFS)	4	(68,000)					4	(68,000)	0
		Promote and Develop Fisheries Appropriation	0	0					0	0	0
		Pacific Coastal Salmon Funds	0	89,803		197		0	0	90,000	197
C	RPS	(Pacific Coastal Salmon Recovery)	0	89,803		197		0	0	90,000	197
	RPS	(State Passthrough of AK)	0	0							
		Pacific Salmon Treaty	0	19,956		44		0	0	20,000	44
	RPS	(Northern Fund)	0	9,978		22			0	10,000	22
	RPS	(Southern Fund)	0	9,978		22			0	10,000	22
	RPS	Pacific Coastal Salmon Fund Obligation (NMFS)	0	109,759		241		0	0	110,000	241
		Pacific Coastal Salmon Fund Budget Authority (NMFS)	0	109,759		241			0	110,000	241
		Pacific Coastal Salmon Fund Appropriation	0	73,759		241	36,000		0	110,000	36,241
	BSF	Fisheries Assistance Fund Obligations	0	0						0	0
		Fisheries Assistance Fund Budget Authority -Discretionary (NMFS)	0	0						0	0
		Fisheries Assistance Fund Appropriation	0	0						0	0

OTHER ACCOUNTS (DISCRETIONARY)
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE Other Accounts	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		Coastal & Ocean Activity Obligations		0			0			0	0
		Coastal & Ocean Budget Authority -Discretionary (NMFS)		0			0			0	0
		Coastal & Ocean Appropriation		420,000			(420,000)			0	(420,000)
										0	0
		Subtotal Line & Staff Office Direct Obligations, Other Accounts (Discretionary)	1	265,048	(998)	243	(3,193)	(149,670)	1	111,430	(153,618)

FY 2002 Crosscut Initiatives

A	PI	People & Infrastructure
B	MSC	Maintain Satellite Continuity & Server Weather Forecasts
C	CCA	Coastal Conservation Activities
D	CS	Climate Services
E	MNF	Modernization of NOAA Fisheries
F	MTS	Modernization of the Marine Transportation System

SUMMARY OF DISCRETIONARY RESOURCES
(\$ IN THOUSANDS)

NOAA CONTROL TABLE All Accounts - Discretionary	FY 2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Base	FY 2002 President's Request Total		Change From FY 2001 Enacted
	FTE	Amount					FTE	Amount	
<u>DIRECT OBLIGATIONS</u>									
ORF Direct Discretionary Obligations	11,262	2,210,099	(133,030)	4,788	52,486	2,134,343	11,375	2,265,309	55,210
PAC Direct Discretionary Obligations	135	757,236	(112,857)	30	(5,987)	638,422	135	768,061	10,825
OTHER Direct Discretionary Obligations	1	265,048	(998)	243	(3,193)	261,100	1	111,430	(153,618)
TOTAL Direct Discretionary Obligations	11,398	3,232,383	(246,885)	5,061	43,306	3,033,865	11,511	3,144,800	(87,583)
<u>DISCRETIONARY BUDGET AUTHORITY</u>									
ORF Discretionary Budget Authority	11,262	2,179,115	(133,030)	4,722	52,136	2,102,943	11,375	2,248,309	69,194
PAC Discretionary Budget Authority	135	749,749	(112,857)	13	(1,683)	635,222	135	764,861	15,112
OTHER Discretionary Budget Authority	29	197,048	(998)	243	(3,193)	193,100	5	43,430	(153,618)
TOTAL Discretionary Budget Authority	11,426	3,125,912	(246,885)	4,978	47,260	2,931,265	11,515	3,056,600	(69,312)
<u>CJS APPROPRIATIONS</u>									
ORF CJS Appropriations	11,262	1,925,615	(133,030)	4,722	234,636	2,031,943	11,375	2,177,309	251,694
PAC CJS Appropriations	135	681,249	(112,857)	13	66,817	635,222	135	764,861	83,612
OTHER CJS Appropriations	1	499,048	(998)	243	(386,863)	111,430	1	114,430	(384,618)
TOTAL CJS Appropriations	11,398	3,105,912	(246,885)	4,978	(85,410)	2,778,595	11,511	3,056,600	(49,312)

(MANDATORY)
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		Other Accounts									
		<u>NOS</u>									
	SHC	Coastal Zone Management Fund Obligations		3,000			0	0	0	3,000	0
		Coastal Zone Management Fund Budget Authority MANDATORY (NOS)		(3,200)			200	0	0	(3,000)	200
		Coastal Zone Management Fund Appropriation		0			0	0	0	0	0
	SHC	Damage Assessment & Restoration Revolving Fund Obligations		0						0	0
		Damage Assessment & Restoration Revolving Fund Budget Authority MANDATORY (NOS)		0						0	0
		Damage Assessment & Restoration Revolving Fund Appropriation		0						0	0
		<u>NOS/NMFS</u>									
		Environmental Improvement and Restoration Fund Obligations	0	2,108				8,327	0	10,435	8,327
	SHC	Environmental Improvement and Restoration Fund Obligations MANDATORY	0	0				5,218	0	5,218	5,218
	BSF	Environmental Improvement and Restoration Fund Obligations MANDATORY	0	2,108				3,109	0	5,217	3,109
		Environmental Improvement and Restoration Fund Budget Authority MANDATORY	0	2,108				8,327	0	10,435	8,327
		Environmental Improvement and Restoration Fund Appropriation	0	0				0	0	0	0
		<u>NMFS</u>									
	BSF	Promote and Develop Fisheries Obligations	0	4,828					4	4,828	0
		Promote and Develop Fisheries Budget Authority MANDATORY (NMFS)	0	72,828					4	72,828	0
		Promote and Develop Fisheries Appropriation	0	0							
	BSF	Federal Ship Financing Fund Obligations		0					0		0
		Federal Ship Financing Budget Authority MANDATORY (NMFS)		0					0		0
		Federal Ship Financing Fund Appropriation		0					0		0
		ORF									
		<u>PROGRAM SUPPORT</u>									
	INFRA	NOAA Corp Retirement Obligations		15,400						15,400	0
		NOAA Corp Retirement Budget Authority MANDATORY (PS)		15,400						15,400	0
		NOAA Corp Retirement Appropriation		15,400						15,400	0
		Subtotal Line & Staff Office Direct Obligations, Other Accounts (Mandatory)	0	25,336	0	0	0	8,327	4	33,663	8,327
		Subtotal Line & Staff Office Budget Authority, Other Accounts (Mandatory)	0	87,136	0	0	200	8,327	4	95,663	8,527
		Subtotal Line & Staff Office Appropriations, Other Accounts (Mandatory)	0	15,400	0	0	0	0	0	15,400	0

(MANDATORY)
(\$ IN THOUSANDS)

FY 2002 Crosscut Initiative	FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE	FY2001 Revised Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration Of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
			FTE	Amount					FTE	Amount	
		Other Accounts									
		FY 2002 Crosscut Initiatives									
A	PI	People & Infrastructure									
B	MSC	Maintain Satellite Continuity & Server Weather Forecasts									
C	CCA	Coastal Conservation Activities									
D	CS	Climate Services									
E	MNF	Modernization of NOAA Fisheries									
F	MTS	Modernization of the Marine Transportation System									

NOAA GRAND TOTAL SUMMARY
(\$ IN THOUSANDS)

FY 2002 Strategic Plan Goal	NOAA CONTROL TABLE	FY 2001 Enacted		FY 2002 Non-Recurring Terminations	FY 2002 Restoration of FY 01 Recission	FY 2002 President's Request ATBs	FY 2002 President's Request Program Change	FY 2002 President's Request Total		Change From FY 2001 Enacted
		FTE	Amount					FTE	Amount	
	GRAND TOTAL Obligations (Mandatory & Discretionary)	11,402	3,257,719	(246,885)	5,061	43,306	119,262	11,515	3,178,463	(79,256)
	GRAND TOTAL Budget Authority (Mandatory & Discretionary)	11,430	3,213,048	(246,885)	4,978	47,460	133,662	11,519	3,152,263	(60,785)
	GRAND TOTAL CJS NOAA APPROPRIATION (Mandatory/Discretionary)	11,398	3,121,312	(246,885)	4,978	(85,410)	278,005	11,511	3,072,000	0
	REIMBURSABLES									
	Reimbursable Obligations:		204,400					0	204,400	0
	Offsetting Collections (fish fees / IFQ CDQ)		4,000					0	4,000	0
	New offsetting collection (Data sales)		3,600					0	3,600	0
	TOTAL REIMBURSABLE Obligations	1,219	212,000					1,219	212,000	0
	Reimbursable Financing:									
	Federal funds		(147,700)					0	(147,700)	0
	Non-federal funds		(56,700)					0	(56,700)	0
	Offset for Fee Collections (FY 2000 Magnuson Fees)		(4,000)					0	(4,000)	0
	Offsetting Collection (data sales)		(3,600)					0	(3,600)	0
	TOTAL REIMBURSABLE Financing		(212,000)					0	(212,000)	0

Advance Short-term Warning and Forecast Service
(Dollar amounts in thousands)

Participation By Activity	FY 2001 Enacted		FY 2002 Request		INC./DEC (REQ. - ENACTED)	
	FTE	AMT.	FTE	AMT.	FTE	AMT.
Oceanic and Atmospheric Research	393	52,673	281	54,884	(112)	2,211
National Weather Service	4,406	624,515	4,310	651,667	(96)	27,152
National Environmental Satellite, Data & Information Serv	751	57,174	767	76,608	16	19,434
Corporate Services	0	0	7	1,059	7	1,059
Office of Marine and Aviation	106	8,366	108	12,696	2	4,330
Facilities Maintenance		1,596	0	2,000	0	404
Systems Acquisition - PAC	130	553,935	130	653,277	0	99,342
Construction - PAC	5	27,465	5	22,250	0	(5,215)
Subtotal, Advance Short-term Warning & Forecast Service	5,791	1,325,724	5,608	1,474,441	(183)	148,717

Implement Seasonal to Interannual Climate Forecasts
(Dollar amounts in thousands)

	FY 2001 Enacted		FY 2002 Request		INC./DEC (REQ. - ENACTED)	
	FTE	AMT.	FTE	AMT.	FTE	AMT.
Participation By Activity						
Oceanic and Atmospheric Research	394	76,421	206	83,573	(188)	7,152
National Weather Service		4,889	41	6,789	41	1,900
National Environmental Satellite, Data & Information Serv	0	57,059	0	42,818	0	(14,241)
Office of Marine and Aviation		118	142	8,026	142	7,908
Facilities Maintenance		799		1,000	0	201
Subtotal, Implement Seasonal to Interannual Climate Forec	394	139,286	389	142,206	(5)	2,920

Predict and Assess Decadal to Centennial Climate Change
(Dollar amounts in thousands)

Participation By Activity	FY 2001 Enacted		FY 2002 Request		INC./DEC (REQ. - ENACTED)	
	FTE	AMT.	FTE	AMT.	FTE	AMT.
Oceanic and Atmospheric Research	128	88,740	314	86,861	186	(1,879)
National Environmental Satellite, Data & Information Service		3,492		3,493	0	1
Office of Marine and Aviation		1,767	0	5,604	0	3,837
Facilities Maintenance		1,596		2,000	0	404
Systems Acquisition - PAC		1,995		3,626	0	1,631
Subtotal, Predict and Assess Decadal to Centennial Climate	128	97,590	314	101,584	186	3,994

Promote Safe Navigation
(Dollar amounts in thousands)

	FY 2001 Enacted		FY 2002 Request		INC./DEC (REQ. - ENACTED)	
	FTE	AMT.	FTE	AMT.	FTE	AMT.
Participation By Activity						
National Ocean Service	776	109,029	504	106,650	(272)	(2,379)
Oceanic and Atmospheric Research		100		900	0	800
Office of Marine and Aviation		1,296	301	20,004	301	18,708
Fleet Replacement - PAC		6,785		9,515	0	2,730
Subtotal, Promote Safe Navigation	776	117,210	805	137,069	29	19,859

Build Sustainable Fisheries
(Dollar amounts in thousands)

	FY 2001 Enacted		FY 2002 Request		INC./DEC (REQ. - ENACTED)	
	FTE	AMT.	FTE	AMT.	FTE	AMT.
Participation By Activity						
National Ocean Service	0	9,866	14	9,866	14	0
National Marine Fisheries Service	2,297	460,235	1,923	433,701	(374)	(26,534)
Oceanic and Atmospheric Research	29	41,840	11	37,155	(18)	(4,685)
National Environmental Satellite, Data & Information Service			0	500	0	500
Corporate Services		748	0	0	0	(748)
Office of Marine and Aviation			387	20,581	387	20,581
Construction - PAC		54,180		14,700	0	(39,480)
Fleet Replacement - PAC		13,271		5,800	0	(7,471)
Fisheries Financing Program Account	0	1,285	0	287	0	(998)
Fishermen's Contingency Fund	1	950	1	952	0	2
Foreign Fishing Observer Fund		191		191	0	0
Environmental Improvement and Retsoration Fund	0	2,108		5,217	0	3,109
Promote and Develop Fisheries		4,828	4	4,828		
Subtotal, Build Sustainable Fisheries	2,327	589,502	2,340	533,778	9	(55,724)

Recover Protect Species
(Dollar amounts in thousands)

Participation By Activity	FY 2001 Enacted		FY 2002 Request		INC./DEC (REQ. - ENACTED)	
	FTE	AMT.	FTE	AMT.	FTE	AMT.
National Ocean Service	0	0	8	3,000	8	3,000
National Marine Fisheries Service	274	151,094	542	149,838	268	(1,256)
Oceanic and Atmospheric Research		100		400	0	300
National Environmental Satellite, Data & Information Service		1,247		1,247	0	0
Corporate Services		748		0	0	(748)
Office of Marine and Aviation		118	0	8,614	0	8,496
Facilities Maintenance		3,358		3,365	0	7
Fleet Replacement - PAC		7,982		4,200	0	(3,782)
Pacific Salmon Treaty		19,956		20,000	0	44
Pacific Coastal Salmon Fund		89,803		90,000	0	197
Subtotal, Recover Protected Species	274	274,406	550	280,664	276	6,258

Sustain Healthy Coasts
(Dollar amounts in thousands)

Participation By Activity	FY 2001 Enacted		FY 2002 Request		INC./DEC (REQ. - ENACTED)	
	FTE	AMT.	FTE	AMT.	FTE	AMT.
National Ocean Service	548	271,246	428	244,970	(120)	(26,276)
National Marine Fisheries Service	81	22,726	92	14,497	11	(8,229)
Oceanic and Atmospheric Research	0	67,596	28	66,415	28	(1,181)
National Environmental Satellite, Data & Information Service		5,987		6,996	0	1,009
Corporate Services				3,437	0	3,437
Office of Marine and Aviation	12	11,104	6	13,608	(6)	2,504
Facilities Maintenance				4,000	0	4,000
Construction - PAC		67,853		27,905	0	(39,948)
Coastal Impact Assistance Fund		149,670			0	(149,670)
Coastal Zone Management Fund		6,193		3,000	0	(3,193)
Environmental Improvement and Restoration Fund		0		5,218	0	5,218
Subtotal, Sustain Healthy Coasts	641	602,375	554	390,046	(87)	(212,329)

All Strategic Plan Goals
(Dollar amounts in thousands)

	FY 2001 Enacted		FY 2002 Request		INC./DEC (REQ. - ENACTED)	
	FTE	AMT.	FTE	AMT.	FTE	AMT.
Participation By Activity						
					0	0
Corporate Services	1,052	68,594	940	70,851	(112)	2,257
Facilities Maintenance	15	3,862	15	5,636	0	1,774
Systems Acquisition - PAC		23,770		26,788	0	3,018
NOAA Corps Retirement		15,400		15,400	0	0
Subtotal, All Strategic Plan Goals	1,067	111,626	955	118,675	(112)	7,049